

# Skills, Training and Knowledge Transfer: Traditional and emerging Heritage Professions

An exploration



<https://www.theparliamentmagazine.eu/articles/opinion/promoting-cultural-heritage-could-boost-eu-economy>

June 2017,

Dr. J.A. van Lakerveld  
Drs. P. Vroonhof  
Drs. S. Broek  
MSc. F.D. Stoutjesdijk  
BSc. S.B. van Loo



**PLATO**

Platform Opleiding, Onderwijs en  
Organisatie B.V.  
Universiteit Leiden





## Inhoud

|     |  |    |
|-----|--|----|
| 1   | Introduction .....   | 3  |
| 1.1 | Background and approach .....  | 3  |
| 2   | Trends and challenges/ developments.....   | 5  |
| 2.1 | Demographic trends .....   | 5  |
| 2.2 | Political trends .....   | 6  |
| 2.3 | Technological trends.....  | 7  |
| 2.4 | Social and cultural trends .....   | 8  |
| 2.5 | Environmental trends .....   | 9  |
| 2.6 | Main challenges .....  | 10 |
| 3   | Three fields of emerging heritage professions .....  | 11 |
| 3.1 | Heritage and conservation and restoration.....   | 12 |
| 3.2 | Heritage promotion and exploitation .....  | 16 |
| 3.3 | Heritage education and interpretation.....   | 18 |
| 4.  | Ways to cope with the developments .....   | 23 |
| 4.1 | Attracting people .....  | 23 |
| 4.2 | Professional development .....   | 23 |
| 4.3 | Policy focus .....   | 23 |
| 5.  | Priorities: skills, training and knowledge transfer.....   | 24 |
| 6   | Good practices/case studies .....  | 26 |
| 6.1 | Case: Amsterdam’s Rijksmuseum exhibition on slavery in 2020.....   | 26 |
| 6.2 | The importance of protecting cultural and natural heritage:<br>The changing nature of security positions within the sector ..... | 28 |
| 6.3 | Case illustration of a new emerging situation in the Netherlands:<br>The art of invisible security .....                         | 29 |
| 6.4 | Towards quality indicators.....  | 31 |
| 7   | References .....   | 32 |
| 8   | Literature (in alphabetical order).....  | 38 |
|     | Appendix 1 Examples of good practice .....   | 42 |
|     | Appendix 2 Traditional and emerging professions.....   | 46 |

# 1 Introduction

## *Definition of cultural heritage*

According to the Council of Europe, Cultural heritage consists of the resources inherited from the past in all forms and aspects - tangible, intangible and digital (born digital and digitized), including monuments, sites, landscapes, skills, practices, knowledge and expressions of human creativity, as well as collections conserved and managed by public and private bodies such as museums, libraries and archives. It originates from the interaction between people and places through time and it is constantly evolving.

These resources are of great value to society from a cultural, environmental, social and economic point of view and thus their sustainable management constitutes a strategic choice for the 21<sup>st</sup> century.<sup>1</sup>

Cultural heritage is a developing, diverse and complex field. This document outlines the developments that influence the heritage sector such as demographic, political, technological, social, cultural as well as environmental trends. Furthermore it analyses how these trends affect the work of heritage staff. From these explorations and analyses issues are derived that will need to be taken into account, or that need to be solved in order to prepare the heritage sector for future challenges. Related to those issues and based on the literature study and analyses of job vacancies a tentative overview of emerging professions is given. The document gives suggestions on how to professionalize the sector in view of the new challenges and adds examples of relevant practices.

## 1.1 Background and approach

In order to identify emerging heritage professions a literature search was done to identify some overall trends affecting the heritage sector and the professions within it. After having acquired this overview of trends a distinction was made between three main areas of emerging professions. Included in the research consortium are three organizations: Panteia; Ockham IPS; PLATO. Together they formed a research team. Their study started with a general literature search, followed by more focused searches in which each of the partners was responsible for a distinct area of professions. For each of the distinguished professional areas, a partner produced:

- A description/elaboration of one of the professional fields of study as described above.
- Examples of emerging professional positions.
- A list of relevant literature.
- When possible some information on how professionals are currently being trained or professionalised.
- A case illustrating the emerging situation and the training needs that come with it.
- A few issues for debate or further exploration.

Based on the information described, a presentation was given on March 3<sup>rd</sup> in Brussels. After the presentation the attendants/members responded to the presentation and were given an opportunity to comment, and add things. Furthermore they were asked to send in examples of good practices as well as the reasons why they considered the selected examples as good practices. This was done in

---

<sup>1</sup> Conclusions on cultural heritage as a strategic resource for a sustainable Europe. (2014).

order to gain insight in the dimensions that compose elements of good practice in work in heritage sites, events, objects, or phenomena.

Then, based on the first comments and the examples given, the presentation was converted to this document.

## 2 Trends and challenges/ developments

As indicated in the first section, at first a set of trends will be described and analysed in order to outline the context in which heritage exists and evolves. These trends are considered the external context in which the heritage sector develops. In addition to those external influences the sector itself of course shows its own inner developments and dynamics.

### 2.1 Demographic trends

#### *Ageing society*

The impact of demographic ageing within Europe is likely to be of major significance in the coming decades. Population ageing began some decades ago and this trend continues which means that Europe will move to a much older population structure. Statistics show that a declining birth rate has led to a relative decline of the number of young people, and a higher life expectancy has led to an increased share of older persons. Population aging has social and economic impact, as well as effects on the sustainability of public finances and welfare provisions.<sup>2</sup>

At the same time, the number of people that have spare time to visit heritage sites will increase. The aging population, in this sense, offers challenges as well as opportunities, both of which will require adequate preparations.

#### *Urbanization*

More than 50% of the world's population lives in urban areas although not all regions of the world have reached this level of urbanisation. "Europe is characterised by a more polycentric and less concentrated urban structure compared to, for instance, the USA or China". In Europe, 72% of the population (approx. 359 million people) live in cities, towns and suburbs. "There are 26 cities of more than 1 million inhabitants and additional 373 cities of more than 100,000 inhabitants in the European Union, representing around 165 million people. 7% of the EU population live in cities of over 5 million inhabitants compared to 25% in the US".<sup>3</sup>

Urbanisation and tourism bring developments that may endanger the sustainability of any heritage city. Rapid urbanization comes with an increase of population and tourism which may threaten the protection of cultural and natural heritage sites. Urbanization has resulted in a change of perception of tourists. First they were welcomed as a source of income, then they were considered a problem in view of conservation and protection of heritage, although undoubtedly the impact tourism has on the economy is valued still. Future generations have to deal with important questions concerning sustainability and sustainable development of small and medium-size historic towns, cities and metropolises. According to the European Commission the contribution of cultural heritage to sustainable development has been crucial: particularly in the regeneration of cities and landscapes.<sup>4</sup> Cities play a major role in promoting heritage and in reverse heritage promotes cities. This is a mutually beneficial relationship notwithstanding the risks it involves for the proper protection and conservation of heritage sites and objects.

---

<sup>2</sup> Population structure and ageing. (2016).

<sup>3</sup> Annex. (n.d.). European Commission.

<sup>4</sup> Thurley, S. et al. (2015).

### *Multiculturalism, migration and mobility*

“Given that the human story is one of migration and multiculturalism, and that the European society is increasingly aware of its diversity, it is vital to include people in their own heritage – whether it is theirs by birth, adoption or residence.”<sup>5</sup> Diversity enriches our heritage. Migration adds to diversity and thus extends our common heritage. Heritage in return offers opportunities to share and discuss values and traditions and to promote a sense of identity and social cohesion in society.

Cultural heritage generates tourism flows. The global economy allows people to travel around the world for touristic purposes. Apart from this growth in tourism, an increase in labour mobility moves EU citizens from their own member states to other parts of Europe, or citizens from non-EU countries to the Union, or vice versa. The consequence of this is a profound change of audiences and visitors to heritage, showing a more and more diverse background and less of a common frame of understanding of heritage. This will be an issue to reflect upon and act upon in various heritage contexts.

## **2.2 Political trends**

### *Global shift of power*

Economic developments worldwide show a shift of power to emerging economies in Asia. Europe faces many challenges that will determine its future success. Europe will need to maintain, or strengthen its position in the global context. Heritage may serve as a base for a sense of identity and social connectedness necessary to do so. Heritage is a means to persuade people to visit and enjoy Europe. On the other side it is a vehicle for cross-cultural, international and intercontinental dialogue.

### *Growing nationalism*

Important questions concern the ongoing appropriation of cultural heritage within the politics of nationalism. Heritage-making is rooted in older histories, and how these came to prefigure constructions of a national consciousness or collective memory. It is argued that cities are the new nation-states of the twenty-first century. Ties between heritage objects, identity, politics and nationalism still demand our critical scrutiny<sup>6</sup>. “Heritage is not the same as history. Heritage is highly processed through mythology, ideology, nationalism, local pride, romantic ideas, or just plain marketing into a commodity”<sup>7</sup>.

Europe-wide nationalism increases. It is important to find a balance between local, national and international, or other identities and communalities.

“There is potential in the trans-nationalisation of heritage for helping to create a cosmopolitan cultural memory. Leaving aside the ethical case for promoting a trans-nationalising heritage, there are other reasons why Europe should turn its pasts inside-out. Hiding from its dark pasts and refusing to do the necessary memory work brings risks of undermining not only the positive aspects of Europe’s shared heritage, but also the very existence of the continent<sup>8</sup>.

This process is complicated by the fact that different parts of Europe may experience competing

---

<sup>5</sup> Dümcke, C. & Gnedovsky, M. (2013).

<sup>6</sup> Winter, T. (2012).

<sup>7</sup> Schouten, F. (1995).

<sup>8</sup> Chalcraft, J. & Delanty, G. (n.d.).

memories. New identity politics are not working in the same direction. Likewise, on a European scale, post-communist countries are dealing with a different past compared to old western democracies<sup>9</sup>.

#### *Position of the EU towards cultural heritage*

“The principle of subsidiarity applies to cultural heritage, limiting the extent to which the EU impacts on Member States’ cultural heritage policies. Still countries reached some agreements on relevant heritage issues. The Council of Europe two treaties cover archaeological and architectural heritage, landscape, trafficking and local self- government. For the EU itself, the fundamental Treaty of Lisbon stipulates that the Union will respect its rich cultural diversity and ensure that Europe’s cultural heritage is safeguarded and enhanced”.<sup>10</sup>

There is growing emphasis on the importance of cultural heritage in sustaining or generating social cohesion. A European Year of Cultural Heritage is proposed for 2018 in which EU member states and other European countries may participate.<sup>11</sup> The work of those active in the heritage sector will need to find the balance between national and EU wide policy frameworks.

In the complex landscape of European political developments and forces characterised above, heritage sees itself confronted with risks of being used for ideological purposes, and opportunities of being a vehicle for cross-national dialogue and forthcoming mutual understanding.

## **2.3 Technological trends**

#### *Digitisation and digitalisation*

Technology adds economic value to the heritage sector. Almost all cultural heritage institutes make use of digital resources.<sup>12</sup> Digitization is the process of converting analogue objects into a digital form. There are different digitisation techniques depending on the types of objects.<sup>13</sup> Digitised cultural material may be used to add value to the visitors’ experience, develop educational content, documentaries, applications and games.<sup>14</sup> Technological trends and possibilities have changed the way we think about heritage. Increasing and improving access to collections is an important driver for heritage organizations to adopt new technologies. The cultural heritage sector can obviously benefit from progressing digital technologies when it comes to international cooperation and participation.<sup>15</sup>

“The digitisation of cultural heritage, whilst initially framed by institutions, is now increasingly a collective process involving community access and collective sharing of knowledge. Citizens’ engagement in cultural heritage management and preservation could be further investigated in order to build on the emerging practice through new investment and the use of digital technologies.”<sup>16</sup> “It is estimated that 17% of heritage collections have been digitised”<sup>17</sup>. “Digitisation and publication of collections online can potentially allow access to content across the globe, and as such, liberate this untapped knowledge potential”.<sup>18</sup>

---

<sup>9</sup> Laarse, R. van der. (2017).

<sup>10</sup> Pugh, K. (2016).

<sup>11</sup> Ibid.

<sup>12</sup> Sotirova, K. et al. (n.d.).

<sup>13</sup> Ibid.

<sup>14</sup> Towards an integrated approach to cultural heritage for Europe. (2014).

<sup>15</sup> Antle, K. et al. (2016).

<sup>16</sup> Thurley, S. et al. (2015).

<sup>17</sup> Stroeker, N. & Vogels, R. (2014).

<sup>18</sup> Borowiecki, K.J. & Navarrete, T. (2017).



The opportunities resulting from **technological trends** in communication seem to be overwhelming. Cultural heritage may stimulate ICT innovation.<sup>19</sup> “There is a demand for new software (digitalisation, easier accessibility) in the field of cultural heritage. Cultural heritage is a source of ideas for new products and services such as the use of virtual reality technologies to interpret historic areas and to support growth of cultural tourism”.<sup>20</sup>

#### *Social media*

Social networks (Facebook, Instagram, Twitter, Pinterest, YouTube, Sketchfab, etc.) are internet based applications enabling users to create, share and exchange information in a form of text, image, video, audio and 3D.

#### *Gamification and serious games*

Gamification represents the integration of game elements in non-game scenarios (sometimes using points, stickers, and stamps). A serious game is a video or a computer game with the main purpose of discovering and learning new things. Entertainment is of secondary importance, in some cases even excluded (military topics, accidents). In heritage interpretation, games stimulate participatory engagement and creativity.<sup>21</sup>

The work in the heritage sectors is profoundly affected by ICT and social media influences and opportunities. Many new positions include ICT aspects, or are completely devoted to ICT applications in heritage contexts.

## **2.4 Social and cultural trends**

#### *Social and economic added value*

For a long time, cultural heritage and cultural activities have traditionally been regarded as costs to society. This view has significantly changed. Currently it is being (re)discovered by governments, organizations and professionals as a means of improving economic performance, as well as people’s lives and living environments. Heritage is no longer a tolerated financial burden but a positive contributor to European Gross Domestic Product (GDP) and innovation.<sup>22</sup>

Cultural heritage is not only important for its economic benefits; it also contributes to European citizen’s wellbeing, sense of history, identity and belonging. These social benefits contribute to social cohesion and stimulate communities and young people to engage with their environment.

Many countries have successfully exploited these benefits, generating prosperity, bringing new jobs and creating improved environments”.<sup>23</sup>

Economic benefits of cultural heritage are most commonly seen *in tourism* and recreational activities. Cultural heritage is seen as a contributor to stabilisation and diversification of tourism flows. “Europe is the world’s number 1 tourist destination and it is the third largest socio-economic activity in the EU, contributing 415 billion Euro’s to the EU GDP and employing 15.2m citizens many of whose jobs are linked to heritage”.<sup>24</sup>

---

<sup>19</sup> Giraud-Labalte, C. et al. (2015).

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Thurley, S. et al. (2015).

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

### *Cultural tourism*

Cultural tourism is far more than production and consumption of 'high' art and heritage. It reaches into some deep conceptual territories relating to how we construct and understand ourselves, the world and the multi-layered relationships between them<sup>25</sup>

This is an area in which volunteering and professionalism, leisure and lifelong learning and development meet. The heritage sector will need to find ways to meet the demands of the increasingly demanding groups of visitors, who are not only interested in getting information, but also in bringing knowledge, sharing knowledge, or creating knowledge together.

## **2.5 Environmental trends**

Cultural and natural heritage are affected by environmental factors. Environmental trends like global warming and climate change are cross-cutting issues throughout Europe. Heritage properties are exposed to a variety of threats. The occurrence of extreme weather events can put cultural heritage at risk. There is a risk of floods, or of extreme weather conditions such as massive rain. Furthermore, pollution and energy issues affect heritage. Added to this are the effects of global warming; a shortage of water, extreme temperatures, erosion and desertification. The effects of climate change also become apparent in the negative impact of tourism.<sup>26</sup> It is one consequence of the increase in air transport for which tourism now accounts for more than 60%, and is therefore responsible for an important share of air emissions.<sup>27</sup> The effects of tourism itself may be seen as an environmental issue in its own right with all its consequences of damaging, littering, polluting and noise.

World Heritage in Europe Today needs to search for ways to find a balance between making heritage accessible on one side and preserving it on the other, accessibility preferably promoting preservation in the meantime.

---

<sup>25</sup> Smith, M. & Robinson, M. (eds.). (2005).

<sup>26</sup> Galland, P. et al. (2016).

<sup>27</sup> Tourism's three main impact areas. (n.d.).

## 2.6 Main challenges

Given the trends outlined in the sections above the challenge is to identify the emerging professions in the heritage sector. So far it has become clear that new professions may emerge to face the challenges of new technology and its potential applications. This includes technologies for purposes of conservation, restoration and protection of heritage. Information and Communication Technology is a particular field of interest showing a variety of possibilities in many aspects of heritage work. ICT applications may be found in the digitization of heritage, but also in the many ways in which heritage is turned into an experience for visitors through various techniques and visual and audio devices. Technology may also play a part in other aspects such as in coping with environmental and security issues.

The growing sector of tourism, the urbanisation and other demographic trends confront the heritage sector with growing numbers of visitors, with increasingly various backgrounds, with a mix of touristic, leisure and educational needs. Emerging professions may also be found in this area of heritage work. Hospitality management, entertainment, marketing, exploitation may be elements to be further developed. This is another area in which newly emerging professions appear. Reaching and including new audiences, promoting participation, empowerment and a sense of identity in order to raise an awareness of the value of heritage are such challenges that new positions may arise to strengthen this aspect of heritage.

In the next chapter areas of emerging professions are explored further in order to identify emerging professions in more detail.

### 3 Three fields of emerging heritage professions

The heritage sector contains many different institutions and activities requiring a variety of professions and skills. The heritage sector relies on a skilled and experienced labour market to properly care, conserve and manage it. This explains the growing body of research examining the heritage labour market and skills.

Heritage professionals work in different fields that demand distinct skills and relevant experience. The need for skills is highly influenced by trends and developments within and outside the ‘heritage sector’. The field of heritage is a developing, diverse and complex field. The interaction between culture, education, training and business has led to new and emerging heritage professions in three main areas:

#### 1. **Heritage conservation, restoration and technology**

*Emerging trends, challenges and related positions in technical and digital aspect of heritage work.*

This includes technical positions in conservation, architecture, maintenance, climate control, environmental issues and digital aspects of storage, analysis, and interpretation of heritage information. Included in this are also digital elements such as web design, apps, tools and ways to make information accessible to audience, and an experience for visitors.

#### 2. **Heritage Promotion and exploitation**

*Emerging trends, challenges and related positions in heritage promotion and exploitation .*

This area includes management, hospitality, public relations, marketing, and staff management and financial management.

#### 3. **Heritage education and interpretation**

*Emerging trends, challenges and related positions in heritage education and interpretation .*

This includes heritage education and training, heritage interpretation, Human Resources Development, training the trainers, initial, and in-service training of staff, accreditation, certification, embeddedness in EU educational structures (European Quality Framework, EQF).

#### *Examples of emerging positions in the fields mentioned*

- Collection managers;
- Conservators, curators;
- Restorers;
- Education, interpretation and outreach staff;
- Researchers;
- ICT and technology professionals;
- Entertainment, hospitality and visitors services staff;
- Sustainability staff;
- Marketing and fund raising staff.

### 3.1 Heritage and conservation and restoration

Restoration and conservation of heritage covers museums, historic buildings, monuments, archaeology, archives etc. Conservation of cultural heritage depends on a wide variety of skills. These range from basic traditional and contemporary construction and restoration techniques to scientific analysis and project management<sup>28</sup>. “The skills involved in conservation can be very specialized and the materials, such as stone from specific quarries, seasoned timber, thatch or slate, may be difficult to procure. Conservation has been threatened by the disappearance of appropriate skilled labour, or of understanding of the use of traditional materials such as lime. Increasing recognition of the value of manual skills is therefore to be welcomed.<sup>29</sup> In terms of conservation, multiple scientific disciplines tend to cooperate more closely in an approach of integrated preservation. Using new materials and technologies of intervention onto objects and interdisciplinary methods of non-invasive techniques of scientific investigation can significantly help conservation of heritage objects. More concretely this approach represents trends towards climate control for preservation of objects and radiation based scientific research methods of heritage objects<sup>30</sup>. 3D imaging and modelling is also increasingly being used for the restoration of heritage artefacts and materials by visualizing objects’ ideal state. These techniques are also used to digitally reconstruct heritage sites in order to preserve them for posterity<sup>31</sup>. Due to these and other new developments and techniques new professions arise within the sector.

#### **Digitisation and trends in technical aspects in heritage professions**

As Bates (2015)<sup>32</sup> argued, the heritage and information professions are currently at a moment of extraordinary changes that challenge the way we think about the usual division of (scientific) disciplines. The usual spectrum with the humanities on one end and the natural sciences on the other does not seem to hold anymore. The introduction of informatics, digitisation and changes in information and natural sciences are adding new fields in the information and heritage professions, merging the heritage community with the ICT industry and harder science communities. Therefore, the heritage professions should be reconceptualised in a way that takes account ways in which both emerging and traditional professions play a role in the digitised landscape. It is important that the profound changes in the heritage professions take place in a way that guarantees traditional requirements of information collection, organisation, retrieval and storage. Moreover, technological and digital developments have major consequences for the construction of visitor experience and opportunities for heritage content creation.

Increasing digitisation rates of collections in European museums, as shown by ENUMERATE<sup>33</sup> pose both **threats and opportunities** to the digital heritage professions. Opportunities can be found in terms of digital storage of heritage in the form of photos and scans and improved online accessibility of these artefacts, whether they only exist in digital form or not. Conway

---

<sup>28</sup> Hooper, G. (2008).

<sup>29</sup> Ibid.

<sup>30</sup> Sandu, I. et al. (2009).

<sup>31</sup> Stanco, F. et al. (n.d.).

<sup>32</sup> Bates, M. (2015).

<sup>33</sup> Stroeker, N. & Vogels, R. (2014).

(2010)<sup>34</sup> argues that the digitisation and preservation of tangible heritage can be categorised in two different types of actions. First, **digitization for preservation** are actions that result in the creation of digital products that are worthy of long-term preservation. It includes selecting materials that are to be digitised, creating full and accurate digital representations with proper descriptions and compiling all results into a coherent digital product. Secondly, **digital preservation** involves all tools, operations standards and policies that ensure the digitised material is not lost. It thus involves the acquisition, maintenance, periodic transformation, and delivery of digital heritage objects in digital collections. In the preservation of digital information, it is important that archival integrity of materials is secured on five aspects: the content should be structured by bits; the material should be in a predictable location, divided into discrete objects with documented custody and be linked to related objects. In this way, when heritage is made digitally available to scholars and consumers, it is easily interpretable.

Conway identifies four major ways technical and digital aspects have changed preservation in the heritage professions. First, technical improvements have caused a shift in the heritage professions that moves away from classic preservation techniques in which individual artefacts have to be handled and treated to preservation through environmental control and digitisation. This shift however, causes collection-level preservation to be of better quality, while individual original pieces suffer over the long term. Secondly, increased opportunities to digitise collections put a strain on the quality assurance of the digitised objects. This trend entails that as digitisation rates increase, the quality of digitised objects on the aforementioned aspects tends to decrease. There is a tension between the quality and quantity of digitised media as a focus on the former may cause sub-par quality media that still hold cultural value to be discarded, while a focus on the latter may entail the creation and maintenance of repositories with no long-term value. Thirdly, the heritage professions have seen a trend from paper preservation to the preservation and digitisation of tape or disc-based media. Ensuring that digitisation standards are complied with and that analogue media are still accessible are major challenges in the new era. Lastly, Conway argues there is a challenge for the heritage professions that has to do with a reconceptualization of identity and expertise. Specifically; can professions that traditionally have dealt with caring for and preserving physical objects redefine themselves to give equal attention to digital media? Increased amounts of visual and aural cultural heritage as well as increased need for new multimedia visitor experience requires the need to recruit and retain a new generation of heritage specialist whose focus is on digitisation and multimedia and social media resources.

Besides changes in storage and management of information, the digital revolution offers other opportunities and challenges for the heritage professions, mainly in the accessibility and delivery of heritage to consumers. For example, new ways of digital visualising heritage buildings and pieces of art by means of virtual 3D modelling and augmented reality can provide visitors with opportunities to interact with and experience heritage. An example of this would be the use of glasses that project a 3D-model of a roman building on existing foundations, in order to give visitors a better feel of the building in its heyday. Furthermore,

---

<sup>34</sup> Conway, P. (2010).

heritage locations can enhance visitor experience by using apps for smart phones and social media in an interactive and educational manner<sup>35</sup>. With regard to 3D-modelling, special mention should be given to the current trend of digital 3D recording, modelling and reconstruction of cultural heritage in conflict areas. Furthermore, monitoring of endangered heritage sites and landscapes in conflict regions through remote sensing has brought major contributions to preservation.

In cases where a large part of a collection or building is digitised, a challenge for heritage locations could be to offer an online-only experience in which all of the aforementioned technologies are used to offer a remote visit from the comfort of one's home. However, previous research has shown that these experiences sometimes do not increase user participation and interaction, indicating that the integration of physical visits with technological aspects might be more effective in achieving those goals<sup>36</sup>. Additionally, online-only experiences may be very useful for heritage locations that have an annual visitor limit for sensitivity reasons, in that they could be used to make them publicly accessible through a digital and online experience. In these cases, ICT solutions can provide close monitoring of visitor counts and guest behaviour, as well as environmental factors, in order to protect physical artefacts.

In the case of public cultural heritage, ICT and the development of web 2.0 has enabled crowdsourcing of data collection, interpretation and communication. Several projects, like COINE and CIPHER have been initiated, in which local European communities can share stories, memories and traditions by uploading testimonies and pictures or photographs. Other initiatives have formed regional communities of common interest that, through online cooperation, research local heritage and build content. These projects are sometimes used by heritage institutions to set up exhibitions or online content (Brizard, 2007)<sup>37</sup>. However, the success of these collaborations between amateurs and professionals in providing a sustainable digital cultural heritage infrastructure is largely dependent on the availability of knowledgeable and loyal amateurs, as well as the network's ability to maintain a certain level of quality<sup>38</sup>. An aspect that can contribute to the success of these collaborations, as well as make available to the public large amounts of heritage objects, is the introduction of open (meta) data principles for heritage institutions<sup>39</sup>. Some strides have been made on this terrain through EC directives and recommendations, but challenges remain, particularly in the domain of intellectual property of heritage works.

Lastly, there still is great potential for the use of social media in heritage experiences and heritage collection. As Giaccardi<sup>40</sup> argues, heritage today is about far more than museum artefacts and historic buildings, or how they are to be preserved and communicated. Social media can be brought to bear on personal encounters with heritage and on the interpretation of heritage works. As smart phones, multimedia devices and the use of social networking sites are ubiquitous in the contemporary world; social media can have a profound effect on

---

<sup>35</sup> Brizard, T. et al. (2007).

<sup>36</sup> Heur, B. van. (2010).

<sup>37</sup> Brizard, T. et al. (2007).

<sup>38</sup> Oomen, J. & Aroyo, L. (2011).

<sup>39</sup> Dietrich, D. & Pekel, J. (2012).

<sup>40</sup> Giaccardi, E. (2012).

different aspects of interpretation of heritage in all shapes and sizes. Mobile and ubiquitous technologies are enabling users to participate spontaneously and continuously in activities of collections, preservation and interpretation of either digitised heritage or digitally mediated forms of heritage practice. It is encouraged that heritage practitioners and institutions use these communication technologies, especially social media, to facilitate visitors' interactive engagement with the content and their social connection with others while doing so.

*A case illustrating the difference between the traditional situation and the new emerging situation and the training needs that come with it*

**Archaeological illustrator**

Archaeological illustrators create artistic reconstructions and representations of archaeological sites and artefacts. It is used in various publication forms, for example cultural centres, museums and even television programmes. It is a growing field within the archaeological disciplines due to modern computer visualisation and printing technologies. Illustrations are used in the recording of archaeological findings, which includes (academic) books, instruction manuals, websites and museums.

*Traditional:*

The traditional situation entailed illustrators making use of both artistic and traditional technical drawing techniques in order to make artistic representations of archaeological artefacts and excavation sites. Due to their archaeological training, people in this field have traditionally performed other tasks besides illustrating such as being the surveyor at archaeological sites, taking part in excavations, archiving and conserving finds. The equipment used for making drawings usually consists of typical high-quality drawing material as well as some material that is specific to technical and archaeological drawing practices. To this category of equipment belong among others: drafting film, an angle-light, profile gauge, callipers, pencils, drafting tape and tissue paper. Traditionally, the work of an illustrator has been largely interpretative by nature. The quality of the drawings largely depends on the trained illustrator's ability to interpret the object he intends to draw. The goal of the illustration is to act as a record of the object and the condition it is in, as well as to present specific features and manufacturing techniques that are evident. In order to show these things, multiple drawings from different angles are often made.

*Training needs in the emerging profession:*

New tasks and methods for archaeological illustrators as a consequence of technological developments mainly revolve around the use of new graphic programmes and imaging techniques. Changes in the methods of archaeological illustrators thus proceed in step mostly with changes in the profession of technical draughtsman. Contemporary illustrators make use of bitmap and vector graphic programmes like Adobe Photoshop and Illustrator, as well as of graphics tablets to make digital drawings of plans and sections from excavated sites. These programmes are also used to visualise archaeological artefacts such as stone tools, pottery and bone artefacts. Photography is also playing an increasingly large role in archaeological illustration as it is necessary to produce truthful visual records of archaeological landscapes, sites, buildings and artefacts. Furthermore, interpretation and reconstruction illustrations can now often be done by making a 3D-model of the site or artefact and making it available through a virtual reality experience or a 3D video. Moreover, imaging techniques such as Reflectance Transformation Imaging and D-stretch can be used to investigate aspects and details of the fabric of artwork and artefacts that cannot be seen with the naked eye. The results of these techniques can provide input for additional (digital) illustrations. All of these digital techniques require illustrators to also be able to manage large quantities of digital files and ensure their security. All considered, these techniques have increasingly moved the profession towards a mix of archaeological digital imaging and digital drawing and away from the classic analogue drawing techniques. The interpretative nature of the illustrator's work has not greatly been diminished by the technological advancements.

*Additional training needs:* Apart from knowledge of the aforementioned technologies, it is essential for professionals in the archaeological sciences and for archaeological illustrators specifically to gain field experience on excavation sites. These experiences promote professional development and allow archaeologists to sharpen their research and excavation skills under the supervision of more experienced professionals.



## 3.2 Heritage promotion and exploitation

In the area of professions management, hospitality, public relations, marketing, staff management and financial management are included.

The heritage and cultural industries engage into competing in the open market by offering visitor attractions that operate along clearly defined commercial lines. It is an experiential approach to marketing heritage sites, or attractions.<sup>41</sup> Not only within the heritage field marketing strategies are used, conversely, businesses and companies use promotion as a strategic tool to promote culture for entrepreneurial purposes to benefit from it in an economic way.<sup>42</sup>

### Trends and developments

Heritage promotion and exploitation plays a role at different levels. For heritage sites and institutions, promotion and exploitation are areas to focus on under influence of budget-cuts.<sup>43</sup> The reduction of (state) support forces them to reconsider alternative funding sources which include finding new business models related to heritage and combining heritage with other services. These sources can lie in linking heritage with for instance business, leisure, and entertainment. This also relates to how heritage sites and institutions organize their space: they increasingly become public spaces that produce social and environmental capital, and become “drivers of economic activity, centres of knowledge, focal points of creativity and culture, places of community interaction and social integration. In short, they generate innovation and contribute to smart, sustainable and inclusive growth, in line with the objectives of the EU 2020 strategy.”<sup>44</sup>

Creative and cultural sectors are hence looking for new business models. Based on an inventory, the following types of new business models are identified:<sup>45</sup>

- Crowd funding/ Crowd sourcing;
- Innovation labs, creative hubs, co-working spaces;
- Streaming;
- Self-Publishing and Printing on demand;
- Gamification;
- P2P Peer to Peer Models.

Siglioccolo et al (2015)<sup>46</sup> explore which role and in what ways companies can support heritage exploitation. They argue that the lack of public funds has forced and encouraged cultural institutions to engage in finding new forms of financing. As a result, companies started to consider the cultural sector as a possible area to invest their resources. First of all, companies are aware of effective use of brand, name or image instead of traditional investments in marketing communicating. Second, companies are more and more interested in associating their image to a cultural institution to get benefits of economic nature. In recent years, there is a progressive involvement of companies in supporting cultural institutions.

This means that companies can use promotion as a strategic tool that promotes culture whilst pursuing entrepreneurial goals. Private companies may help cultural institutions to obtain precious

---

<sup>41</sup> Leighton, D. (2007).

<sup>42</sup> Siglioccolo, M. et al. (2015).

<sup>43</sup> Professional Skills in Local Authority Archaeological Services 2013. (2013).

<sup>44</sup> Towards an integrated approach to cultural heritage for Europe. (2014).

<sup>45</sup> Dümcke, C. (2015).

<sup>46</sup> Siglioccolo, M. et al. (2015).

assets necessary for their financial health and future. Developing relationships with companies may widen the opportunities cultural institutions have to endure and prosper in the future.

There is not only a need for cultural institutions to acquire financial resources; managerial skills have also become increasingly crucial for their viability. The word 'manager' was rarely used in cultural institution job titles; this is not the case anymore<sup>47</sup>.

These developments imply that heritage sites and institutions bring in new skills and competences on how to 'sell' heritage, finding ways to open up the sites and institutions to a broader public and raise alternative funding. Related to archaeology for instance, research indicates that future skills gaps will exist in promotion, business management, and fundraising.<sup>48</sup> These areas are considered crucial for the sustainability of sites and the skills are becoming increasingly important. Moreover, for museums as well, marketing staff promote museums and their exhibitions, by producing marketing materials like leaflets and posters, running social media campaigns and inviting critics to review exhibitions. In many museums marketing staff and fundraisers are becoming increasingly important.

Professions associated with promoting and exploiting heritage are:

- Fundraisers, including using new business models.
- Marketing staff, including use of social media, ability to relate to media and critics.
- Management staff with the ability to establish cross-links with other sectors and activities.

Heritage can also play a role in promoting a *city, a region, a country, or even a continent*. The economic value of heritage has only come into the focus of research recently<sup>49</sup>, but is already well understood by city governments. Heritage is included as key element in strategies of 'marketing as storytelling'.<sup>50</sup> An example is how heritage is used for city marketing. Heritage plays an increasingly important role in city-marketing. Being selected as European Cultural Capitals is seen as beneficial from the viewpoint of city marketing and attracting visitors and businesses to a city or region.<sup>51</sup> In addition, many cities use their heritage to promote the city and establish an environment that is conducive to living, working and visiting.<sup>52</sup> Heritage can have major impacts on economic variables. These include 'place branding', real estate markets, housing stock management and regional competitiveness.<sup>53</sup> The significance of cultural heritage is related to the four main reasons for marketing a city:<sup>54</sup>

- Attraction of tourism,
- Attraction of investment and development of industry and entrepreneurship,
- Attraction of new residents,
- Influence on the local community – internal marketing.

---

<sup>47</sup> Siglioccolo, M. et al. (2015).

<sup>48</sup> Professional Skills in Local Authority Archaeological Services 2013. (2013).

<sup>49</sup> Dümcke, C. & Gnedovsky, M. (2013).

<sup>50</sup> Nationaal Congres Citymarketing met als thema: 'heritage marketing'. (2015).

<sup>51</sup> McAtee, N. et al. (2014).

<sup>52</sup> Hellemans, K. & Lowyck, I. (2013).

<sup>53</sup> Giraud-Labelle, C. et al. (2015).

<sup>54</sup> Karmowska, J. (n.d.).

Using heritage in promotion and exploitation at the level of the city, region, country (and continent) calls for new skills sets in the heritage sector. These include marketing and fundraising skills, but also networking and cooperation skills. In addition, more intermediary professions are seen in the heritage sector such as culture-brokers, linking different cultural activities to specific (societal) needs.

*An example of a master programme on heritage management<sup>55</sup>*

The MA in Heritage Management is an intensive three semester (one and a half academic year) postgraduate programme which uniquely combines the worlds of archaeology and business and is taught in Athens at Eleusina, an area of world-class archaeological significance. It focuses on teaching the skills required for the management of heritage sites across the world as well as how to effectively work with archaeologists, architects, conservators, and marketing and education specialists while fundraising and supervising specific projects.

*"The MA in Heritage Management based in Greece is a worthwhile enterprise. The skills you gain from the programme are much in demand. Such training forms a very significant step forward."*

Professor Lord Colin Renfrew, Honorary Professor of University of Kent.

"Our MA in Heritage Management provides professionals with the unique opportunity to fine tune their skills and knowledge so that they are able to manage archaeological sites anywhere in the world, thus making local heritage relevant to a global audience."

*Professor Gregory P Prastacos, Dean, Howe School of Technology Management, Stevens Institute of Technology*

*Innovative collaboration*

This new master's programme is a collaborative dual award from the University of Kent in UK and the Athens University of Economics and Business (AUEB) in Greece, a partnership that ensures world-class tuition and an interdisciplinary learning environment. A critical element in the local dynamism and global relevance of the programme is provided by the Initiative for Heritage Conservancy, an innovative education and research project (supported by prominent international and Greek bodies and philanthropists) that creates its own opportunities in the field.

### 3.3 Heritage education and interpretation

The third area of heritage professions includes heritage education and training, heritage interpretation, Human resources development, training the trainers of heritage educators and interpreters, initial, and in-service training of heritage staff, accreditation, certification, embeddedness in EU educational structures.

#### *Heritage education*

Heritage education becomes more and more prominent in educational and heritage contexts. Policy makers in EU bodies (The Council of Europe and the European Commission) and in worldwide organizations such as UNESCO promote both the protection of our cultural and natural heritage and the use of heritage to enrich learning processes of people in general and youngsters in particular. Heritage education may be divided into two strands: One strand mainly focussing on informing and involving audiences in order to get them acquainted with their heritage, and to raise their awareness

---

<sup>55</sup> MA in Heritage Management. (n.d.).

of its value. The other strand focuses on heritage as a learning context for competence development and acquisition in a wider sense. In such projects heritage is perceived and used as a meaningful and rich environment for competence acquisition, for example for acquiring competences for lifelong learning. The strands although theoretically distinct often appear in blended forms.

The inclusion of heritage education in teaching and heritage education in heritage environments, or sites, has implication for both teachers and heritage education staff. Reflections on how to teach about heritage, how to involve heritage in education and teaching, or how to include heritage education in heritage work are important and delicate. The heritage sector differs from schools as schools differ from the heritage sector. Both sectors have their own priorities, and their own traditions and preferences in how to facilitate and accommodate (young) visitors. The challenge for the future is to optimize the synthesis of the two perspectives and the two practices.

“The fruitful combination of schooling and heritage education, as well as the synthesis of the two strands mentioned (Heritage for heritage purposes, and heritage for competence acquisition purposes) will serve all purposes best. Heritage preservation on the one side and heritage education on the other seem to be mutually beneficial. Learners will become aware of the value of heritage as such, and of its value for their own learning and development processes”.<sup>56</sup>

**Example of a training programme for heritage educators in Spain,  
(Instituto Andaluz del Patrimonio Historico)**

The example given concerns university programmes for heritage education staff.

**Cultural Heritage Educator**

*Definition of the Profession*

An educator teaches, programs, and carries out educational actions on heritage contents, within the formal and informal education fields, in order to raise awareness, inform and arouse visitors' interest in what they are learning or seeing in an active participative way.

In order to do so, cultural heritage educators use the most advanced techniques in socio-cultural animation, heritage revitalisation and museum education, museums being the original place of these educational and revitalising activities on the cultural heritage.

*The focus is on the following skills :*

- Planning and management skills
- Organizational skills
- Group dynamics skills
- Communication skills
- Skills related to customer care

*Labour market perspectives*

**Public sector**

Cultural heritage educators generally develop their career in cultural institutions (museums, archaeological sites, ...) and in local administration cultural areas. Sometimes it is museum curators that carry out such tasks. The most usual way to carry out this job in the public administration is as a self-employed person or through administrative or labour contracts.

---

<sup>56</sup> Lakerveld, J. van & Gussen, I. (eds.). (n.d.).

#### Private sector

A large number of SMEs and MICROSMEs have been set up. They are specialised in the latest cultural heritage education techniques and work for public and private institutions, or make proposals to heritage institutions, depending on the case. Sometimes cultural heritage educators are hired to carry out specific projects under a hiring model, or else they are hired on a self-employment basis.<sup>57</sup>

#### *Heritage Interpretation*

Heritage interpretation is a structured approach to non-formal learning specialised in communicating significant ideas about a place to people on leisure. It establishes a link between visitors and what they can discover at heritage sites such as a nature reserve, a historic site or a museum.

Good interpretation is always based on first-hand experience and often on personal contact with staff on site.<sup>58</sup>

Special characteristics of interpretation are:

- Visitors should normally not perceive interpretation as an educational activity but as an interesting and enjoyable service that enhances their heritage experience. Nevertheless, heritage interpretation is a 'structured approach to facilitate learning processes', which qualifies as an educational activity.
- Interpretation works from the specificities of a site or collection towards more universal ideas, i.e. it focuses on site-specific phenomena and facts and reveals the wider and deeper meanings by embedding the specificities in meaningful contexts.
- Interpretation specialises in motivating non-captivated target audiences by addressing their needs, by raising expectations and fulfilling them. Interpretation also tries to actively involve audiences by relating the content to their personal knowledge, interests, feelings and values and by encouraging discovery, engaging senses and reflection.<sup>59</sup>

---

<sup>57</sup> Professions: Cultural Heritage Educator. (n.d.).

<sup>58</sup> Interpret Europe (n.d.).

<sup>59</sup> Interpreting Heritage (n.d.).

## An example of an introductory training programme for heritage interpreters<sup>60</sup>

| Time table                                      | Introduction  |
|---|---|
| 12.00 h   | Getting acquainted: people are asked to bring an object and to explain who they are and why they brought this object.   |
| 12.30 h   | A brief explanation of the course theme and the course programme  |
| 12.45 h   | Participants are invited to tell something about their experience in the heritage sector and to what they expect the course to bring to them  |
| 13.00 h   | An introduction in the concept, the approach and the key features of heritage interpretation<br>Dialogue on the essentials of the approach and the possible added value   |
| 13.45 h   | Break   |
| Articulating needs and expectations             |   |
| 14.00 h   | People are invited to do a mutual interview on what they would identify as the need they would like to be met in this course. Participants summarise the needs of the one they have interviewed in one or two sentences, which they write on a common flipchart. Where possible a distinction is made between personal development needs, professional development needs. |
| 14.40 h   | Group dialogue on how the needs may be met, where they are similar and where they differ, and how professional and personal development needs; visitor and participant needs may be synthesized.  |
| Competence based approach                       |   |
| 15.00 h   | The formulated competences are projected and linked to the needs identified so far.   |
| 15.15 h   | The trainer explains briefly the relevance of a competence oriented approach within the training event as well as in working with visitors in heritage sites.   |
| 15.30 h   | Break (lunch)   |
| Site based learning, an interpretative approach |   |
| 16.30 h   | Brief introduction to an excursion to a site; subgroups of participants get an assignment to organise an interpretative tour, or write interpretative panels to a well identified target group of visitors (a group of colleagues, a diverse audience, de group of parents and children,...)  |
| 17.30 h   | Upon return, the participants elaborate on their work on a flipchart.<br>The subgroups exchange their work and discuss the merits of it   |
| 18.45 h   | Break   |
| Assessment and Self evaluation                  |   |
| 19.00 h   | Individual evaluation using some of the questions presented above under the heading self-assessment for instance:<br>What did I learn?<br>What helped me most in acquiring this competence?<br>What would be a rewarding next move?   |
| 19.15 h   | A session in subgroups of maximum 4 participants talking about the question:<br>Mention one thing you would have done if you had been your peer and one thing your peer has done and you consider doing next time.  |
| Time table                                      | Possible activities   |
| 19.45 h   | Brief explanation of the relevance and potential of systematic validation of professional competences.  |
| 19.55 h   | Handing out information on validation as included in this guidelines document as suggestion for further reading   |
| 20.00 h   | Closure   |

<sup>60</sup> Guidelines. (n.d.).

In the domain of heritage education and interpretation a number of relatively new positions have emerged. Among them are the following:

- Heritage education.
- Educative design.
- Heritage interpretation.
- Copywriting.
- Interpretative planning.
- Heritage interpretation training.
- Assessing, Accreditation, Validation, Certification.

### 3.4 Loss of expertise

Apart from emerging professions in the sense of newly developed professions, a number of professions seem to be understaffed, or a shortage of available staff exists. Among those are numerous crafts that are at risk since no longer sufficient people are available who are able to maintain, repair, or restore particular historical objects. Apart from people not being available there is also evidence that many of those who are available are lacking the qualifications for the jobs they do on traditional buildings. In the UK this was researched and it appears that in work on historical buildings 87 % of the contractors had no formal qualification, 75 % had no specific training and 89% of them were mainstream construction companies.<sup>61</sup>

The heritage sector employs an ageing group of professionals and volunteers, so the loss of expertise will increase when these people will leave the profession. The loss of expertise will concern not only traditional crafts but also knowledge and competences in the areas of restoration, preservation, history, and archaeology<sup>62</sup>.

Also in the domain of heritage education and interpretation a lack of qualified staff is available.

---

<sup>61</sup> Tait, P. (n.d.).

<sup>62</sup> Ibid.

## **4. Ways to cope with the developments**

### **4.1 Attracting people**

One way to promote the necessary changes in the heritage sector is to trigger an interest among visitors to make raise their awareness of this sector being a career challenge, an opportunity for interesting and innovative work. Volunteers may also be approached in a way that challenges them to develop themselves and the sector to meet the requirements of today. The heritage sector may gain from getting in closer touch with other related sectors and disciplines. This may include domains as technology, tourism, education and training, marketing and public relations, architecture and design, governance, management etc.

### **4.2 Professional development**

Another way to promote enhancement and innovations in the sector is by processes of professional development. Such development starts with focused recruitment to see the right people (professionals and volunteers) to enter this field of work. Throughout their working life/period in-service education will maintain and upgrade their competences. Research may be done to support these processes and to provide empirical evidence for the professional development to be based upon. Information management and knowledge sharing will help to bring the performance of the heritage sector to a higher level.

### **4.3 Policy focus**

Focused policies will be needed to guarantee continuity in expertise and craftsmanship. The above mentioned areas of professional development also require policies and strategies to initiate implement and further develop the professions, or positions in the sector, for the sake of the preservation of heritage, the appreciation of heritage, the impact of heritage in many aspects of the lives of citizens throughout Europe and beyond. Heritage is an asset, it is an engine of the economy, it contributes not only to tourism, but also to societal dialogues and cultural development. Heritage raises awareness on issues of sustainability, preservation of nature as well as culture; it provides people with life stories and roots, thus adding to a sense of identity and belongingness. Policy makers need to be aware of this and seek to optimize these processes by supporting them with adequate initiatives, strategies and plans. This requires leadership and management competences.



## 5. Priorities: skills, training and knowledge transfer

After the OMC meeting of March 3<sup>rd</sup> in Brussels, attendants provided feedback on the presentation by providing the researchers with ideas on priorities in further developing the heritage sector. Furthermore they listed examples of good practice and explained the reasons why they felt these were good practices. From these inputs the researchers derived inputs they integrated into this document, but also ideas on what may be the mechanisms behind these good practices and how could these practices be promoted. Derived priorities include:

### *Technology and science*

Heritage is at risk in many ways. The risks consist of climate changes, consequences of human behaviour such as pollution, noise, and other threats. Technology and science offer the insight and the tools to promote conservation, restoration and reconstruction of heritage. The fast developments of science and technology require continuous dialogue to explore and share new possibilities in applying new techniques for conservation and protection purposes. Digital developments are an example of how technological developments rapidly invade the work of heritage staff.

- Technology
- Sustainability issues
- Conservation
- Digitization and digitalisation

### *Entrepreneurship and leadership*

Heritage will be served by entrepreneurial leadership. Heritage is not only to be considered a value in the cultural sense it is also an economic endeavour. These two sides will have to be synthesized and made mutually beneficial. This will require strategic planning involving relevant stakeholders (beneficiaries, businesses, sponsors, authorities, citizens, research organisations). A second requirement is the development of adequate innovative business models for the exploitation of heritage sites. The nature of heritage as a part of our shared history requires a participatory approach, not only in managing heritage sites, but also in the ways heritage is turned into a meaningful experience for visitors and staff.

- Entrepreneurship
- Focus on strategic planning
- Innovative business models
- Participative approaches

### *Education, interpretation and training*

Although heritage is not only associated with education and learning, but also with leisure, activity, enjoyment etc., education and training, as well as interpretation are often mentioned as priorities for the development of the heritage sector. Multidisciplinary training is needed to help staff look beyond the limits of their own disciplines to seek synergy with other disciplines and fields of work. There is a need to promote heritage in relation to education and lifelong learning and to train staff to enable them to provide educative and interpretative offers. For audiences to identify with heritage it is

important that the staff employed in heritage sites reflect the composition of society. As for age, as well as for Ethnicity, the sector still has a long way to go before this ambition is fulfilled.

- Multidisciplinary training
- Skills training
- Lifelong learning
- Diversification

### *Safety and security*

Safety and security of both visitors and of the heritage itself are increasingly an issue of concern. One of the examples added to this document stresses the importance of these issues and how additional competences and positions emerge to guarantee the required safety and security. Positions and priorities that emerge are manifold.

- Security
- Transport
- Safety planning
- Crowd control mechanisms

In the next chapter of this article a few examples of good practice are outlined and analysed. From these good practices a set of quality dimensions is derived (cf. section 6.4)

## 6 Good practices/case studies

### 6.1 Case: Amsterdam's Rijksmuseum exhibition on slavery in 2020

#### *Introduction*

According to the 'Spectrum of Audience Engagement model' museums can take and offer multiple positions that offer different experiences to visitors, all at the same time. When delivering knowledge there often is little engagement with the audience. But when engaging people with immersive experiences there's more interactivity, when empowering people with debate and discussions the audience can get, and contribute to, new perspectives. In the end, everybody wants museums to involve, co-create and empower more! Museums exist because of the knowledge they have to offer and therefore it is important to maintain and make this knowledge available to the audience. At the same time, a museum should also involve the public and facilitate discussion and be inviting to a wide range of target groups.

**Trend:** *There is a need for more involvement, co-creation and empowerment.*

#### *An example of an exhibition with audience engagement.*

The Rijksmuseum will organise an exhibition devoted to the Netherlands and slavery in 2020. The approach of the new director Taco Dibbits marks a break with the vision of former directors who devoted little attention to the darker side of the country's history.<sup>63</sup> Wim Pijbes the former director of the museum had put more emphasize on the great successes and victories in Dutch history and now Dibbits want to show the audience how treasures were collected in the period of slavery.<sup>64</sup> The collection tells the history of the Netherlands which is connected with many countries,' says Dibbits. In his view 'the good and less good are part must all be shown'.<sup>65</sup>

The museum's collection includes many objects which refer to slavery, including three dimensional tableaus of slaves working on plantations made by a Surinamese Dutch artist Gerrit Schouten. The collection also includes etchings and paintings featuring slaves, including child slaves in the service of wealthy families<sup>66</sup> said.

#### *Analyses*

Although the exhibition will be open in 2020 it is interesting to see that the Rijksmuseum already communicates with the audience. It is obvious they want to engage the public. Already discussions are going on and many people react positively to the upcoming exhibition because they think it is a good idea to show the dark side of this part of history. There was a time nobody wanted to talk about slavery because the Dutch were not proud of this part of history.

The new exhibition already provides room for debate. Because the museum is busy with the design of the exhibition there is room for advice and input of historians and other experts. In the process of the design of the new exhibition the new director communicates a strong vision. In The Art Newspaper he said that: "The treasures of the Rijksmuseum and its Dutch art are not just Dutch history but world heritage. It has the power to unite people," he says. Referring to the institution's

---

<sup>63</sup> Stove, H. (2017).

<sup>64</sup> Zeil, W. van & Beukers, G. (2017).

<sup>65</sup> Amsterdam's Rijksmuseum to hold exhibition on slavery in 2020. (2017).

<sup>66</sup> Zeil, W. van & Beukers, G. (2017).

social role today and the Netherlands' history of global trade, he adds: "We should look for common ground in the past."<sup>67</sup> He wants to increase community involvement.

Furthermore this case illustrates that the Rijksmuseum presents itself as a platform on which memories and emotions are brought together. This leaves room for participation, multiple perspectives and dialogue. The ideas on how to promote audience engagement are systematically represented in the scheme below composed by Andrew McIntyre, a director at strategic research consultancy firm Morris Hargreaves McIntyre, on how to redefine the role of museums in the 21st century.<sup>68</sup>

#### A new policy matrix: The spectrum of audience engagement

| Deliver  | Inform  | Involve   | Co-create  | Empower   |
|--|---|---|--|---|
| <b>WE BELIEVE</b><br>Museum knowledge and research underpin our purpose            | <b>WE BELIEVE</b><br>Education sets you free and improves your life   | <b>WE BELIEVE</b><br>Museums inspire curiosity and fire the imagination | <b>WE BELIEVE</b><br>Sharing experiences and identities builds community   | <b>WE BELIEVE</b><br>Sharing ideas builds an empathetic and participatory society       |
| <b>PERSONALITY</b><br>Trusted expert   | <b>PERSONALITY</b><br>Benevolent educator                             | <b>PERSONALITY</b><br>Inspirational storyteller                         | <b>PERSONALITY</b><br>Generous partner                                     | <b>PERSONALITY</b><br>Egalitarian facilitator   |
| <b>THE MUSEUM IS A</b><br>Storehouse of knowledge                                  | <b>THE MUSEUM IS A</b><br>Centre for learning                         | <b>THE MUSEUM IS A</b><br>Portal to an amazing world                    | <b>THE MUSEUM IS A</b><br>Community builder                                | <b>THE MUSEUM IS A</b><br>Platform for ideas  |
| <b>WE OFFER</b><br>Authoritative reference   | <b>WE OFFER</b><br>Interpretation                                     | <b>WE OFFER</b><br>Immersive experiences                                | <b>WE OFFER</b><br>Emotional connections                                   | <b>WE OFFER</b><br>Debate and discussion  |
| <b>YOU'LL EXPERIENCE</b><br>Knowledge  | <b>YOU'LL EXPERIENCE</b><br>Understanding                             | <b>YOU'LL EXPERIENCE</b><br>Active engagement                           | <b>YOU'LL EXPERIENCE</b><br>A sense of community                           | <b>YOU'LL EXPERIENCE</b><br>New perspectives  |
| <b>OUR PROMISE</b><br>Our expert knowledge is credible, authoritative and accurate | <b>OUR PROMISE</b><br>We will open your mind and expand your horizons | <b>OUR PROMISE</b><br>We make learning and discovery fun and magical    | <b>OUR PROMISE</b><br>Share your story and ours to find personal relevance | <b>OUR PROMISE</b><br>You will not be judged and can make up your own mind              |
| <b>OUR BRAND ESSENCE</b><br>Keepers of the flame                                   | <b>OUR BRAND ESSENCE</b><br>Explain the world                         | <b>OUR BRAND ESSENCE</b><br>Hands on, minds on                          | <b>OUR BRAND ESSENCE</b><br>Self-discovery + Shared identity = Community   | <b>OUR BRAND ESSENCE</b><br>Safe place for challenging ideas                            |
| <b>CONTEXT OF EXCHANGE</b><br>Institutional  | <b>CONTEXT OF EXCHANGE</b><br>Individual                              | <b>CONTEXT OF EXCHANGE</b><br>Social                                    | <b>CONTEXT OF EXCHANGE</b><br>Communal                                     | <b>CONTEXT OF EXCHANGE</b><br>Societal  |
| <b>OUR COMMUNICATION STYLE</b><br>Single, authoritative voice                      | <b>OUR COMMUNICATION STYLE</b><br>One group telling another           | <b>OUR COMMUNICATION STYLE</b><br>Telling relevant stories              | <b>OUR COMMUNICATION STYLE</b><br>Two-way exchange                         | <b>OUR COMMUNICATION STYLE</b><br>Multiple viewpoints with as many questions as answers |

Source: [www.mhminsight.com](http://www.mhminsight.com)

<sup>67</sup> Pes, J. (2016).

<sup>68</sup> Morris Hargreaves McIntyre, on how to redefine the role of museums in the 21st century, <http://www.internationalartsmanager.com/blog/whats-next-for-museums.html>

## 6.2 The importance of protecting cultural and natural heritage: the changing nature of security positions within the sector

Cultural and natural heritage belong to everyone. Museologists and conservators preserve our collected heritage which is of great importance. Europe as a political body has become more concerned with the protection and security of heritage in the last decade. The protection and use of heritage is seen as a powerful instrument that provides a sense of belonging amongst and between European citizens. In addition to that, it is a valuable resource for economic growth and employment.<sup>69</sup>

### *The need to preserve and secure heritage*

Protecting cultural heritage has many sides. It concerns conservation to keep heritage intact for future generations, it is about protecting paintings and art works in museums, but also about securing heritage for crime or destruction. There is a lot of attention for all security aspects within the heritage sector.

And as Syed Asif Akhtar Naqvi (2013) says: “One thing is apparent, that as far as museum collections are concerned, there are overlapping areas between security and the conservation and preservation responsibilities of the curator”<sup>70</sup>.

“The International Council for Museums (ICOM) publication<sup>71</sup>, ‘Running a Museum: A Practical Handbook’ edited by Patrick J. Boylan has a full chapter on Museum Security and Disaster Preparedness contributed by Pavel Jirasek. In this chapter, the author states that, “Security is everybody’s business and all museum staff (not only security guards but also curatorial and technical staff and management) form part of its security system and the same applies to every operation taking place in the institution and all resources used by it. Nobody can be allowed to opt out of the security procedures.” Explaining his position, he further states that a museum is simply a special institution entrusted with the custody of immensely important objects and which are at particular risk from theft, vandalism, fire, water, chemicals, etc. Everyone who is in any way connected with it must respect that fact and cooperate with the security procedures. The security systems also include external relations the museum has with its principal partners, including the Fire department and Police. In addition to the collections, the museum must, of course, also ensure the protection of its visitors and employees, of its other property and its reputation”<sup>72</sup>.

*Many pieces of artworks in museums are stolen each year globally, and many cases of art crimes are facilitated by lax security at museums. Museum security tends to be poor, and many art thefts are crimes of opportunity.*<sup>73</sup> Other potential dangers are<sup>74</sup>:

- Risk from natural disasters.
- Technical breakdowns.
- Accidents.
- Illegal activities.
- Armed conflict risks.

---

<sup>69</sup> Towards an integrated approach to cultural heritage for Europe. (2014).

<sup>70</sup> Naqvi, S.A.A. (n.d.).

<sup>71</sup> Boylan, P.J. et al. (2004).

<sup>72</sup> Naqvi, S.A.A. (n.d.).

<sup>73</sup> Chen, F. & Regan, R. (2016).

<sup>74</sup> Naqvi, S.A.A. (n.d.).

Due to these risks, many museums especially the larger ones in Europe have adopted high standards and measures to prevent and secure their cultural property.

“Security in museums is not simply an issue of installing CCTV, IDS, smoke detectors, fire extinguishers or other devices in museum buildings or dealing with natural disasters, but it is a much wider museological concern, (yes, the security of museum building and installations, collections, staff and visitors are all important and museums should make all efforts in this direction). It is to prevent damage, deterioration, destruction, demolition of natural and cultural heritage directly or indirectly by human activities. The major threat to the collections of natural and cultural diversity of the past (stored in museums around the world) as well as to the living diversity of nature and culture is not from natural disasters, but by man-made disasters, especially crime, riots and wars. The ultimate destroyer and demolisher is man himself. Therefore, the ultimate aim of security is to safeguard humans, their environment and belongings from their fellow beings and their destructive activities, particularly vandalism, theft, loot, plunder, and war (Bamiyan, Ayodhya, Sudan, Iraq, Libya and many other places around the world).”<sup>75</sup>

The following case illustrates not only the importance of security for museums, but it also illustrates how new techniques can contribute to enhance the protection of artworks and the protection of visitors. These new techniques require new skills and competences to serve the heritage sector.

### 6.3 Case illustration of a new emerging situation in the Netherlands: The art of invisible security

In 2016 a Dutch museum ‘the Noordbrabants Museum in ‘s-Hertogenbosch received global attention in the context of the Hieronymus Bosch exhibition. The director of a small Dutch museum secured 20 of 25 surviving panels by ‘the devil’s painter’ to mark the artist’s 500<sup>th</sup> anniversary. More than 250.000 visitors were expected, so the museum decided for the first time to open seven days a week from 9a.m. until 7p.m. for the duration of the exhibition. People from all over the world came to see this special exhibition and even Spanish and Italian were added to the list of languages for the exhibition booklets<sup>76</sup>.

Naturally, security was faced with a substantial challenge. The museum strived for a high level of security, quadrupling the number of security guards, yet aiming to maintain an optimal visitor experience.

The exhibition consisted of pieces from other museums. This meant that the museum regarding the presentation and security needed to deal with a high standard of requirements of several other museums, private owners and insurers. The museum worked with a:

- **E-ticketing system:** to spread the number of visitors the tickets could only be used within a certain time period.
- **Safety Plan:** with a focus on *crowd control*. By organising the crowd everyone could enjoy the exhibition optimal. This was very important because too many people bring risks for the visitors as well as for the paintings and art works.

---

<sup>75</sup> Naqvi, S.A.A. (n.d.).

<sup>76</sup> Kennedy, M. (2015).

- **Simulation technology:** used to predict the effects of big crowds. The managing director of the museum explains they designed a map of the interior of the museum and the temporary buildings. They released virtual visitors on the map who displayed realistic algorithmic behaviour within the virtual model. This showed where they could expect problems with large crowds. Blue was good, but where red and purple spots emerged in the drawing, the flow was insufficient to be made and adjustments were needed. They calculated how many visitors could be in the space. To be cost-efficient, they needed to let in many people and because of the simulation technology, it was possible to find a compromise between the commercial objectives and the safety of visitors.
- **Revision of the interior:** to meet the high standards of other museums like the Louvre (Paris) and the Metropolitan (New York) (of which they borrowed art works), the museum needed to follow their guidelines to optimise *environmental conditions*. Charcoal drawings, for example, are extremely sensitive to light and air pollution. The latter can occur with very large numbers of visitors in combination with insufficient air treatment. *This is also why* big museums are very cautious in loaning their masterpieces.
- **Transport:** the masterpieces needed to be guided by special couriers, who can ensure the loading is done carefully and that the art has been transported under the required security technical and climatic conditions.
- **Security guards:** The museum worked together with a company that is specialized in security and they brought together a team of persons who were selected on competences like hospitality and a pro-active attitude. They followed a training course in predictive profiling, or recognizing abnormal behaviour which may be the harbinger of an incident.
- **Central CCTV (Closed Circuit Television) room:** a central place where visitors are monitored by centralists and senior security guards to optimize security and take action if needed.

### Occupational/skills development within heritage sector

Trends and developments to protect and secure cultural heritage which demand new positions and new competences/skills. The Dutch case illustrated the following needs:

- Higher level of security guards.
- Increased numbers of security guards .
- Special couriers for transport.
- Safety plan to be prepared for emergencies (new: higher standards to meet environmental conditions).
- Crowd control mechanisms for museum who attract many visitors (new: use of new technologies).

Apart from the protection of cultural heritage another trend is visible in the quest for security and safety. Countries that had been popular for tourism have seen their tourism economies collapse through these events, and other neighbouring areas have suffered knock-on effects. Countries that offer stability and security to their **potential travellers** are increasingly more attractive and will benefit during times of uncertainty. People still seek to travel but security and safety are critical issues that influence their decisions on where to go. <sup>77</sup>

---

<sup>77</sup> Antle, K. et al. (2016).

Threat:

- One tragic event can destroy an entire tourism economy at the national, regional and local scale.
- Concern about this potential impact strangles investment and development.
- Long term planning suffers.
- Funding for heritage is seen as optional and resources go towards security related activities.

In the context of museums today, it is a responsibility and duty to make our paramount efforts to safeguard not only the heritage in our custody (collections), but also the existing diversity of nature and culture.<sup>78</sup>

## 6.4 Towards quality indicators

From the practices described in this chapter and those included in Appendix 1, and from the explanations given by those who collected these examples on why they felt these were good examples, a set of key indicators of good practice were derived. The following list of qualities summarize the arguments given for good quality initiatives. They together form a list of quality dimensions that may be seen as a preliminary set of quality indicators for heritage practices. It is interesting to see that most of them refer to interactive and audience oriented qualities.

- Participatory.
- Empowering.
- Inclusive.
- Focusing on dialogue.
- Activating.
- Experiential.
- Focusing on learning.
- Multi-sensory.
- Multi-medial.
- Multi-cultural.
- Sustainable.
- Economically viable.

These indicators, together with the four key fields of emerging professions, may provide a model of what to focus on in strengthening the heritage sector and the way it approaches heritage and the audiences it wishes to serve.

---

<sup>78</sup> Naqvi, S.A.A. (n.d.).



## 7 References

1. Conclusions on cultural heritage as a strategic resource for a sustainable Europe. (2014). Retrieved from [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/educ/142705.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/142705.pdf)
2. Population structure and ageing. (2016). Eurostat Statistics Explained. Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Population\\_structure\\_and\\_ageing](http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing)
3. Annex. (n.d.). European Commission. Retrieved from [http://ec.europa.eu/regional\\_policy/sources/conferences/urban2014/doc/issues\\_paper\\_annex.pdf](http://ec.europa.eu/regional_policy/sources/conferences/urban2014/doc/issues_paper_annex.pdf)
4. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe. Report of the Horizon 2020 Expert Group on Cultural Heritage*. Brussels. Brussels: European Commission. doi:10.2777/745666
5. Dümcke, C. & Gnedovsky, M. (2013). *The Social and Economic Value of Cultural Heritage: literature review*. Retrieved from <https://pdfs.semanticscholar.org/3a70/d26f9adf6b277216b8f3acf7909927bf2bc5.pdf>
6. Winter, T. (2012). *Heritage and Nationalism: An Unbreachable Couple?* Retrieved from [https://www.westernsydney.edu.au/\\_data/assets/pdf\\_file/0017/413630/ICS\\_Occasional\\_Paper\\_Series\\_3\\_4\\_Winter\\_Final.pdf](https://www.westernsydney.edu.au/_data/assets/pdf_file/0017/413630/ICS_Occasional_Paper_Series_3_4_Winter_Final.pdf)
7. Schouten, F. (1995). Heritage as Historical Reality. In, D. Herbert (ed.), *Heritage, Tourism and Society* (pp. 21-31). Retrieved from [https://www.westernsydney.edu.au/\\_data/assets/pdf\\_file/0017/413630/ICS\\_Occasional\\_Paper\\_Series\\_3\\_4\\_Winter\\_Final.pdf](https://www.westernsydney.edu.au/_data/assets/pdf_file/0017/413630/ICS_Occasional_Paper_Series_3_4_Winter_Final.pdf)
8. Chalcraft, J. & Delanty, G. (n.d.). *Can Heritage be Transnationalised? The Implications of Transnationalism for Memory and Heritage in Europe and Beyond*. Retrieved from <http://culturalbase.eu/can-heritage-be-transnationalised-the-implications-of-transnationalism-for-memory-and-heritage-in-europe-and-beyond/>
9. Laarse, R. van der. (2017). Competing Memories: Interview with Rob van der Laarse. Retrieved from <http://www.traces.polimi.it/2017/01/28/competing-memories-interview-with-rob-van-der-laarse/>
10. Pugh, K. (2016). *Heritage & the EU: How the EU impacts on our heritage in England*. London: The Heritage Alliance. Retrieved from <http://www.theheritagealliance.org.uk/tha-website/wp-content/uploads/2014/07/Heritage-the-EU-May-2016.pdf>
11. Pugh, K. (2016). *Heritage & the EU: How the EU impacts on our heritage in England*. London: The Heritage Alliance. Retrieved from <http://www.theheritagealliance.org.uk/tha-website/wp-content/uploads/2014/07/Heritage-the-EU-May-2016.pdf>
12. Sotirova, K. et al. (n.d.). *Digitization of Cultural Heritage - Standards, Institutions, Initiatives*. Retrieved from <http://www.math.bas.bg/infres/book-ADCH/ADCH-ch1.pdf>
13. Sotirova, K. et al. (n.d.). *Digitization of Cultural Heritage - Standards, Institutions, Initiatives*. Retrieved from <http://www.math.bas.bg/infres/book-ADCH/ADCH-ch1.pdf>
14. Towards an integrated approach to cultural heritage for Europe. (2014). Brussels: European Commission. Retrieved from [http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication\\_en.pdf](http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication_en.pdf)

15. Antle, K. et al. (2016). *European trends and developments affecting heritage interpretation*. Retrieved from [http://www.interpret-europe.net/fileadmin/Documents/publications/smp\\_step\\_analysis\\_09-03-16.pdf](http://www.interpret-europe.net/fileadmin/Documents/publications/smp_step_analysis_09-03-16.pdf)
16. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe*. Report of the Horizon 2020 Expert Group on Cultural Heritage. Brussels. Brussels: European Commission. doi:10.2777/745666
17. Stroeker, N. & Vogels, R. (2014). *Survey Report on Digitisation in European Cultural Heritage Institutions 2014*. Retrieved from <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2014.pdf>
18. Borowiecki, K.J. & Navarrete, T. (2017). Digitization of heritage collections as indicator of innovation. *Economics of Innovation and New Technology*, 26(3), 227-246. doi:10.1080/10438599.2016.1164488
19. Giraud-Labalte, C. et al. (2015). *Cultural heritage counts for Europe*. Krakow: CHCfE Consortium. Retrieved from [http://www.historic-towns.org/html/originals/CHCfE\\_FULL-REPORT\\_v2.pdf](http://www.historic-towns.org/html/originals/CHCfE_FULL-REPORT_v2.pdf)
20. Giraud-Labalte, C. et al. (2015). *Cultural heritage counts for Europe*. Krakow: CHCfE Consortium. Retrieved from [http://www.historic-towns.org/html/originals/CHCfE\\_FULL-REPORT\\_v2.pdf](http://www.historic-towns.org/html/originals/CHCfE_FULL-REPORT_v2.pdf)
21. Giraud-Labalte, C. et al. (2015). *Cultural heritage counts for Europe*. Krakow: CHCfE Consortium. Retrieved from [http://www.historic-towns.org/html/originals/CHCfE\\_FULL-REPORT\\_v2.pdf](http://www.historic-towns.org/html/originals/CHCfE_FULL-REPORT_v2.pdf)
22. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe*. Report of the Horizon 2020 Expert Group on Cultural Heritage. Brussels. Brussels: European Commission. doi:10.2777/745666
23. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe*. Report of the Horizon 2020 Expert Group on Cultural Heritage. Brussels. Brussels: European Commission. doi:10.2777/745666
24. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe*. Report of the Horizon 2020 Expert Group on Cultural Heritage. Brussels. Brussels: European Commission. doi:10.2777/745666
25. Smith, M. & Robinson, M. (eds.). (2005). *Cultural Tourism in a Changing World. Politics, Participation and (Re)presentation*. Clevedon: Channel View Publications. Retrieved from <http://www00.unibg.it/dati/corsi/44108/50648-smith-robinson-proofs.pdf>
26. Galland, P. et al. (2016). *World heritage in Europe today*. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0024/002436/243680e.pdf>
27. Tourism's three main impact areas. (n.d.). Retrieved from <https://www.gdrc.org/uem/eco-tour/envi/one.html>
28. Hooper, G. (2008). *Crafts and cultural heritage conservation skills*. Council of Europe Recommendations. Retrieved from <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17689&lang=en>
29. Hooper, G. (2008). *Crafts and cultural heritage conservation skills*. Council of Europe Recommendations. Retrieved from <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17689&lang=en>

30. Sandu, I. et al. (2009). Environmental technologies in the field of scientific conservation of cultural heritage. New perspectives and directions of research. *Present environment and sustainable development*, 3, 97-105. Retrieved from <http://pesd.ro/articole/nr.3/11.Sandu.pdf>
31. Stanco, F. et al. (n.d.). *Digital Imaging for Cultural Heritage Preservation*. Retrieved from [https://www.researchgate.net/profile/Stephane\\_Derrode/publication/280893389\\_Analysis\\_of\\_ancient\\_mosaic\\_images\\_for\\_dedicated\\_applications/links/55e6da4a08ae3ad5dab2a8bd.pdf](https://www.researchgate.net/profile/Stephane_Derrode/publication/280893389_Analysis_of_ancient_mosaic_images_for_dedicated_applications/links/55e6da4a08ae3ad5dab2a8bd.pdf)
32. Bates, M. (2015). The information professions: knowledge, memory, heritage. *Information Research*, 20(1). Retrieved from <http://www.informationr.net/ir/20-1/paper655.html#.WR6-aE1dC71>
33. Stroeker, N. & Vogels, R. (2014). *Survey Report on Digitisation in European Cultural Heritage Institutions 2014*. Retrieved from <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2014.pdf>
34. Conway, P. (2010). Preservation in the Age of Google: Digitization, Digital Preservation, and Dilemmas. *Library Quarterly*, 80(1), 61-79. Retrieved from <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/85223/J15%20Conway%20Preservation%20Age%20of%20Google%202010.pdf?sequence=1>
35. Brizard, T. et al. (2007). *Basic Guidelines for Cultural Heritage Professionals in the Use of Information Technologies: How can ICT support cultural heritage?* Retrieved from <http://www.enamecenter.org/files/documents/Know-how%20book%20on%20Cultural%20Heritage%20and%20ICT.pdf>
36. Heur, B. van. (2010). Contemporary policy debates: Small cities and the geographical bias of creative industries research and policy. *Journal of Policy Research in Tourism, Leisure and Events*, 2(2), 189-192. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/19407963.2010.482281?journalCode=rprt20>
37. Brizard, T. et al. (2007). *Basic Guidelines for Cultural Heritage Professionals in the Use of Information Technologies: How can ICT support cultural heritage?* Retrieved from <http://www.enamecenter.org/files/documents/Know-how%20book%20on%20Cultural%20Heritage%20and%20ICT.pdf>
38. Oomen, J. & Aroyo, L. (2011). *Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges*. Retrieved from [http://www.iisi.de/fileadmin/IISI/upload/2011/p138\\_oomen.pdf](http://www.iisi.de/fileadmin/IISI/upload/2011/p138_oomen.pdf)
39. Dietrich, D. & Pekel, J. (2012). *European Public Sector Information Platform Topic Report No. 2012 / 04: Open Data in Cultural Heritage Institutions*. Retrieved from [https://www.europeandataportal.eu/sites/default/files/2012\\_open\\_data\\_in\\_cultural\\_heritage\\_institutions.pdf](https://www.europeandataportal.eu/sites/default/files/2012_open_data_in_cultural_heritage_institutions.pdf)
40. Giaccardi, E. (2012). *Heritage and Social Media: Understanding heritage in a participatory culture*. London: Routledge
41. Leighton, D. (2007). 'Step back in time and live the legend': experiential marketing and the heritage sector. *International Journal of Nonprofit and Voluntary Sector Marketing*, 12, 117–125. doi:10.1002/nvsm.288
42. Siglioccolo, M. et al. (2015). 'Exploring companies' support in heritage exploitation: which role may companies play? Retrieved from <http://sinergiejournal.eu/index.php/XXVII/article/view/1244>

43. Professional Skills in Local Authority Archaeological Services 2013. (2013). Retrieved from <https://content.historicengland.org.uk/content/heritage-counts/pub/2013/algao-skills-provisions-local-authorities.pdf>
44. Towards an integrated approach to cultural heritage for Europe. (2014). Brussels: European Commission. Retrieved from [http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication\\_en.pdf](http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication_en.pdf)
45. Dümcke, C. (2015). *New Business Models in the Cultural and Creative Sectors (CCSs). European Expert Network on Culture (EENC)*. Retrieved from <http://www.interarts.net/descargas/interarts2540.pdf>
46. Siglioccolo, M. et al. (2015). 'Exploring companies' support in heritage exploitation: which role may companies play? Retrieved from <http://sinergiejournal.eu/index.php/XXVII/article/view/1244>
47. Siglioccolo, M. et al. (2015). 'Exploring companies' support in heritage exploitation: which role may companies play? Retrieved from <http://sinergiejournal.eu/index.php/XXVII/article/view/1244>
48. Professional Skills in Local Authority Archaeological Services 2013. (2013). Retrieved from <https://content.historicengland.org.uk/content/heritage-counts/pub/2013/algao-skills-provisions-local-authorities.pdf>
49. Dümcke, C. & Gnedovsky, M. (2013). The Social and Economic Value of Cultural Heritage: literature review. Retrieved from <https://pdfs.semanticscholar.org/3a70/d26f9adf6b277216b8f3acf7909927bf2bc5.pdf>
50. Nationaal Congres Citymarketing met als thema: 'heritage marketing'. (2015). Retrieved from <http://pretwerk.nl/topnieuws/nationaal-congres-citymarketing-met-als-thema-heritage-marketing/35855>
51. McAtee, N. et al. (2014). *Ex-post Evaluation of the 2013 European Capitals of Culture: Final Report for the European Commission DG Education and Culture December 2014*. Retrieved from <https://ec.europa.eu/programmes/creative-europe/sites/creative-europe/files/files/ecoc-2013-full-report.pdf>
52. Hellemans, K. & Lowyck, I. (2013). Leuven experimenteert met toeristisch onthaalbeleid. *Faro, tijdschrift over cultureel erfgoed*, 6(3). Retrieved from [https://issuu.com/faronet/docs/sept\\_digitaal](https://issuu.com/faronet/docs/sept_digitaal)
53. Giraud-Labelte, C. et al. (2015). *Cultural heritage counts for Europe*. Krakow: CHCfE Consortium. Retrieved from [http://www.historic-towns.org/html/originals/CHCfE\\_FULL-REPORT\\_v2.pdf](http://www.historic-towns.org/html/originals/CHCfE_FULL-REPORT_v2.pdf)
54. Karmowska, J. (n.d.). *Cultural heritage as an element of marketing strategy in European historic cities*. Retrieved from [http://www.cyfronet.krakow.pl/~ncbratas/pdf/full\\_karmowska.pdf](http://www.cyfronet.krakow.pl/~ncbratas/pdf/full_karmowska.pdf)
55. MA in Heritage Management. (n.d.). Retrieved from <http://www2.aueb.gr/heritage/>
56. Lakerveld, J. van & Gussen, I. (eds.). (n.d.). *Acquiring Key Competences through Heritage Education*. Retrieved from [http://online.ibc.regione.emilia-romagna.it/l/libri/pdf/Aqueduct\\_EN.pdf](http://online.ibc.regione.emilia-romagna.it/l/libri/pdf/Aqueduct_EN.pdf)
57. Professions: Cultural Heritage Educator. (n.d.). Retrieved from <http://www.iaph.es/web/canales/formacion/orientacion-profesional/profesiones/educador-patrimonio-cultural.html?lang=en>

58. What is heritage interpretation? (n.d.). Retrieved from <http://www.interpret-europe.net/feet/home/heritage-interpretation.html>
59. Training Manual. (n.d.). Inherit. Retrieved from <http://www.interpretingheritage.eu/en/outcomes/training-manual>
60. Guidelines. (n.d.). Inherit. Retrieved from <http://www.interpretingheritage.eu/en/outcomes/guidelines>
61. Tait, P. (n.d.). *Skills Needs Analysis 2013: Repair, Maintenance and Energy Efficiency Retrofit of Traditional (pre-1919) Buildings in England and Scotland*. Retrieved from <https://content.historicengland.org.uk/content/docs/education/skills-needs-analysis-2013-repair-maintenance-energy-efficiency-retrofit.pdf>
62. Tait, P. (n.d.). *Skills Needs Analysis 2013: Repair, Maintenance and Energy Efficiency Retrofit of Traditional (pre-1919) Buildings in England and Scotland*. Retrieved from <https://content.historicengland.org.uk/content/docs/education/skills-needs-analysis-2013-repair-maintenance-energy-efficiency-retrofit.pdf>
63. Stove, H. (2017). *Rijksmuseum komt met tentoonstelling over slavernij*. Amsterdam: Het Parool. Retrieved from <http://www.parool.nl/stadsgids/rijksmuseum-komt-met-tentoonstelling-over-slavernij~a4460699/>
64. Zeil, W. van & Beukers, G. (2017). *Nieuwe directeur Rijksmuseum breekt met verleden en maakt tentoonstelling over slavernij*. Amsterdam: De Volkskrant. Retrieved from <http://www.volkskrant.nl/wetenschap/nieuwe-directeur-rijksmuseum-breekt-met-verleden-en-maakt-tentoonstelling-over-slavernij~a4460392/?hash=7191bac6fd279199ba536753c2bd61214cf15a9b>
65. Amsterdam's Rijksmuseum to hold exhibition on slavery in 2020. (2017). Dutchnews. Retrieved from <http://www.dutchnews.nl/news/archives/2017/02/amsterdams-rijksmuseum-to-hold-exhibition-on-slavery-in-2020/>
66. Zeil, W. van & Beukers, G. (2017). *Nieuwe directeur Rijksmuseum breekt met verleden en maakt tentoonstelling over slavernij*. Amsterdam: De Volkskrant. Retrieved from <http://www.volkskrant.nl/wetenschap/nieuwe-directeur-rijksmuseum-breekt-met-verleden-en-maakt-tentoonstelling-over-slavernij~a4460392/?hash=7191bac6fd279199ba536753c2bd61214cf15a9b>
67. Pes, J. (2016). *Rijksmuseum promotes Taco Dibbits to be new director general: Scholarly head of collections to take overall charge of Dutch national museum of art. The art newspaper*. Retrieved from <http://theartnewspaper.com/news/museums/rijksmuseum-promotes-taco-dibbits-to-be-new-director-general/>
68. Morris Hargreaves McIntyre, on how to redefine the role of museums in the 21st century, <http://www.internationalartsmanager.com/blog/whats-next-for-museums.html>
69. Towards an integrated approach to cultural heritage for Europe. (2014). Brussels: European Commission. Retrieved from [http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication\\_en.pdf](http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication_en.pdf)
70. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84) (page89)
71. Boylan, P.J. et al. (2004). *Running a museum: A practical handbook*. Paris: ICOM. Retrieved from [http://icom.museum/uploads/tx\\_hpoindexbdd/practical\\_handbook.pdf](http://icom.museum/uploads/tx_hpoindexbdd/practical_handbook.pdf)

72. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84) (page89)
73. Chen, F. & Regan, R. (2016). *Why are there so many art thefts and what can be done about them?* EconomistsTalkArt.org. Retrieved from <https://economiststalkart.org/2016/05/31/why-are-there-so-many-art-thefts-and-what-can-be-done-about-them/>
74. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84) (page89)
75. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84) (page89)
76. Kennedy, M. (2015). *Dutch museum achieves the impossible with new Hieronymus Bosch show*. The Guardian. Retrieved from <https://www.theguardian.com/artanddesign/2015/oct/21/hieronymus-bosch-exhibition-holland-small-museum-host-largest-ever>
77. Antle, K. et al. (2016). *European trends and developments affecting heritage interpretation*. Retrieved from [http://www.interpret-europe.net/fileadmin/Documents/publications/smp\\_step\\_analysis\\_09-03-16.pdf](http://www.interpret-europe.net/fileadmin/Documents/publications/smp_step_analysis_09-03-16.pdf)
78. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84) (page89)



## 8 Literature (in alphabetical order)

1. Amsterdam's Rijksmuseum to hold exhibition on slavery in 2020. (2017). Dutchnews. Retrieved from <http://www.dutchnews.nl/news/archives/2017/02/amsterdams-rijksmuseum-to-hold-exhibition-on-slavery-in-2020/>
2. Annex. (n.d.). European Commission. Retrieved from [http://ec.europa.eu/regional\\_policy/sources/conferences/urban2014/doc/issues\\_paper\\_annex.pdf](http://ec.europa.eu/regional_policy/sources/conferences/urban2014/doc/issues_paper_annex.pdf)
3. Antle, K. et al. (2016). *European trends and developments affecting heritage interpretation*. Retrieved from [http://www.interpret-europe.net/fileadmin/Documents/publications/smp\\_step\\_analysis\\_09-03-16.pdf](http://www.interpret-europe.net/fileadmin/Documents/publications/smp_step_analysis_09-03-16.pdf)
4. Bates, M. (2015). The information professions: knowledge, memory, heritage. *Information Research*, 20(1). Retrieved from <http://www.informationr.net/ir/20-1/paper655.html#.WR6-aE1dC71>
5. Borowiecki, K.J. & Navarrete, T. (2017). Digitization of heritage collections as indicator of innovation. *Economics of Innovation and New Technology*, 26(3), 227-246. doi:10.1080/10438599.2016.1164488
6. Boylan, P.J. et al. (2004). *Running a museum: A practical handbook*. Paris: ICOM. Retrieved from [http://icom.museum/uploads/tx\\_hpoindexbdd/practical\\_handbook.pdf](http://icom.museum/uploads/tx_hpoindexbdd/practical_handbook.pdf)
7. Brizard, T. et al. (2007). *Basic Guidelines for Cultural Heritage Professionals in the Use of Information Technologies: How can ICT support cultural heritage?* Retrieved from <http://www.enamecenter.org/files/documents/Know-how%20book%20on%20Cultural%20Heritage%20and%20ICT.pdf>
8. Chalcraft, J. & Delanty, G. (n.d.). *Can Heritage be Transnationalised? The Implications of Transnationalism for Memory and Heritage in Europe and Beyond*. Retrieved from <http://culturalbase.eu/can-heritage-be-transnationalised-the-implications-of-transnationalism-for-memory-and-heritage-in-europe-and-beyond/>
9. Chen, F. & Regan, R. (2016). *Why are there so many art thefts and what can be done about them?* EconomistsTalkArt.org. Retrieved from <https://economiststalkart.org/2016/05/31/why-are-there-so-many-art-thefts-and-what-can-be-done-about-them/>
10. Conclusions on cultural heritage as a strategic resource for a sustainable Europe. (2014). Retrieved from [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/educ/142705.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/142705.pdf)
11. Conway, P. (2010). Preservation in the Age of Google: Digitization, Digital Preservation, and Dilemmas. *Library Quarterly*, 80(1), 61-79. Retrieved from <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/85223/J15%20Conway%20Preservation%20Age%20of%20Google%202010.pdf?sequence=1>
12. Dietrich, D. & Pekel, J. (2012). *European Public Sector Information Platform Topic Report No. 2012 / 04: Open Data in Cultural Heritage Institutions*. Retrieved from [https://www.europeandataportal.eu/sites/default/files/2012\\_open\\_data\\_in\\_cultural\\_heritage\\_institutions.pdf](https://www.europeandataportal.eu/sites/default/files/2012_open_data_in_cultural_heritage_institutions.pdf)
13. Dümcke, C. & Gnedovsky, M. (2013). *The Social and Economic Value of Cultural Heritage: literature review*. Retrieved from <https://pdfs.semanticscholar.org/3a70/d26f9adf6b277216b8f3acf7909927bf2bc5.pdf>

14. Galland, P. et al. (2016). *World heritage in Europe today*. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0024/002436/243680e.pdf>
15. Giaccardi, E. (2012). *Heritage and Social Media: Understanding heritage in a participatory culture*. London: Routledge
16. Giraud-Labelle, C. et al. (2015). *Cultural heritage counts for Europe*. Krakow: CHCFE Consortium. Retrieved from [http://www.historic-towns.org/html/originals/CHCFE\\_FULL-REPORT\\_v2.pdf](http://www.historic-towns.org/html/originals/CHCFE_FULL-REPORT_v2.pdf)
17. Guidelines. (n.d.). Inherit. Retrieved from <http://www.interpretingheritage.eu/en/outcomes/guidelines>
18. Hellemans, K. & Lowyck, I. (2013). Leuven experimenteert met toeristisch onthaalbeleid. *Faro, tijdschrift over cultureel erfgoed*, 6(3). Retrieved from [https://issuu.com/faronet/docs/sept\\_digitaal](https://issuu.com/faronet/docs/sept_digitaal)
19. Heur, B. van. (2010). Contemporary policy debates: Small cities and the geographical bias of creative industries research and policy. *Journal of Policy Research in Tourism, Leisure and Events*, 2(2), 189-192. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/19407963.2010.482281?journalCode=rprt20>
20. Hooper, G. (2008). *Crafts and cultural heritage conservation skills*. Council of Europe Recommendations. Retrieved from <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17689&lang=en>
21. Karmowska, J. (n.d.). *Cultural heritage as an element of marketing strategy in European historic cities*. Retrieved from [http://www.cyfronet.krakow.pl/~ncbratas/pdf/full\\_karmowska.pdf](http://www.cyfronet.krakow.pl/~ncbratas/pdf/full_karmowska.pdf)
22. Kennedy, M. (2015). *Dutch museum achieves the impossible with new Hieronymus Bosch show*. The Guardian. Retrieved from <https://www.theguardian.com/artanddesign/2015/oct/21/hieronymus-bosch-exhibition-holland-small-museum-host-largest-ever>
23. Laarse, R. van der. (2017). *Competing Memories: Interview with Rob van der Laarse*. Retrieved from <http://www.traces.polimi.it/2017/01/28/competing-memories-interview-with-rob-van-der-laarse/>
24. Lakerveld, J. van & Gussen, I. (eds.). (n.d.). *Acquiring Key Competences through Heritage Education*. Retrieved from [http://online.ibc.regione.emilia-romagna.it/l/libri/pdf/Aqueduct\\_EN.pdf](http://online.ibc.regione.emilia-romagna.it/l/libri/pdf/Aqueduct_EN.pdf)
25. Leighton, D. (2007). 'Step back in time and live the legend': experiential marketing and the heritage sector. *International Journal of Nonprofit and Voluntary Sector Marketing*, 12, 117–125. doi:10.1002/nvsm.288
26. MA in Heritage Management. (n.d.). Retrieved from <http://www2.aueb.gr/heritage/>
27. McAtee, N. et al. (2014). *Ex-post Evaluation of the 2013 European Capitals of Culture: Final Report for the European Commission DG Education and Culture December 2014*. Retrieved from <https://ec.europa.eu/programmes/creative-europe/sites/creative-europe/files/files/ecoc-2013-full-report.pdf>
28. Morris Hargreaves McIntyre, on how to redefine the role of museums in the 21st century, <http://www.internationalartsmanager.com/blog/whats-next-for-museums.html>
29. Naqvi, S.A.A. (n.d.). *Museum Security*. Retrieved from [http://ignca.nic.in/Museum\\_security2013/museum\\_security\\_proceedings01.pdf#page=84\(page89\)](http://ignca.nic.in/Museum_security2013/museum_security_proceedings01.pdf#page=84(page89))



30. Nationaal Congres Citymarketing met als thema: 'heritage marketing'. (2015). Retrieved from <http://pretwerk.nl/topnieuws/nationaal-congres-citymarketing-met-als-thema-heritage-marketing/35855>
31. Oomen, J. & Aroyo, L. (2011). *Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges*. Retrieved from [http://www.iisi.de/fileadmin/IISI/upload/2011/p138\\_oomen.pdf](http://www.iisi.de/fileadmin/IISI/upload/2011/p138_oomen.pdf)
32. Pes, J. (2016). *Rijksmuseum promotes Taco Dibbits to be new director general: Scholarly head of collections to take overall charge of Dutch national museum of art. The art newspaper*. Retrieved from <http://theartnewspaper.com/news/museums/rijksmuseum-promotes-taco-dibbits-to-be-new-director-general/>
33. Population structure and ageing. (2016). Eurostat Statistics Explained. Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Population\\_structure\\_and\\_ageing](http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing)
34. Professional Skills in Local Authority Archaeological Services 2013. (2013). Retrieved from <https://content.historicengland.org.uk/content/heritage-counts/pub/2013/algao-skills-provisions-local-authorities.pdf>
35. Professions: Cultural Heritage Educator. (n.d.). Retrieved from <http://www.iaph.es/web/canales/formacion/orientacion-profesional/profesiones/educador-patrimonio-cultural.html?lang=en>
36. Pugh, K. (2016). *Heritage & the EU: How the EU impacts on our heritage in England*. London: The Heritage Alliance. Retrieved from <http://www.theheritagealliance.org.uk/tha-website/wp-content/uploads/2014/07/Heritage-the-EU-May-2016.pdf>
37. Sandu, I. et al. (2009). Environmental technologies in the field of scientific conservation of cultural heritage. New perspectives and directions of research. *Present environment and sustainable development*, 3, 97-105. Retrieved from <http://pesd.ro/articole/nr.3/11.Sandu.pdf>
38. Schouten, F. (1995). Heritage as Historical Reality. In, D. Herbert (ed.), *Heritage, Tourism and Society* (pp. 21-31). Retrieved from [https://www.westernsydney.edu.au/\\_data/assets/pdf\\_file/0017/413630/ICS\\_Occasional\\_Paper\\_Series\\_3\\_4\\_Winter\\_Final.pdf](https://www.westernsydney.edu.au/_data/assets/pdf_file/0017/413630/ICS_Occasional_Paper_Series_3_4_Winter_Final.pdf)
39. Siglioccolo, M. et al. (2015). 'Exploring companies' support in heritage exploitation: which role may companies play? Retrieved from <http://sinergiejournal.eu/index.php/XXVII/article/view/1244>
40. Smith, M. & Robinson, M. (eds.). (2005). *Cultural Tourism in a Changing World. Politics, Participation and (Re)presentation*. Clevedon: Channel View Publications. Retrieved from <http://www00.unibg.it/dati/corsi/44108/50648-smith-robinson-proofs.pdf>
41. Sotirova, K. et al. (n.d.). *Digitization of Cultural Heritage - Standards, Institutions, Initiatives*. Retrieved from <http://www.math.bas.bg/infres/book-ADCH/ADCH-ch1.pdf>
42. Stanco, F. et al. (n.d.). *Digital Imaging for Cultural Heritage Preservation*. Retrieved from [https://www.researchgate.net/profile/Stephane\\_Derrode/publication/280893389\\_Analysis\\_of\\_ancient\\_mosaic\\_images\\_for\\_dedicated\\_applications/links/55e6da4a08ae3ad5dab2a8bd.pdf](https://www.researchgate.net/profile/Stephane_Derrode/publication/280893389_Analysis_of_ancient_mosaic_images_for_dedicated_applications/links/55e6da4a08ae3ad5dab2a8bd.pdf)
43. Stove, H. (2017). *Rijksmuseum komt met tentoonstelling over slavernij*. Amsterdam: Het Parool. Retrieved from <http://www.parool.nl/stadsgids/rijksmuseum-komt-met-tentoonstelling-over-slavernij~a4460699/>

44. Stroeker, N. & Vogels, R. (2014). *Survey Report on Digitisation in European Cultural Heritage Institutions 2014*. Retrieved from <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2014.pdf>
45. Tait, P. (n.d.). *Skills Needs Analysis 2013: Repair, Maintenance and Energy Efficiency Retrofit of Traditional (pre-1919) Buildings in England and Scotland*. Retrieved from <https://content.historicengland.org.uk/content/docs/education/skills-needs-analysis-2013-repair-maintenance-energy-efficiency-retrofit.pdf>
46. Thurley, S. et al. (2015). *Getting cultural heritage to work for Europe. Report of the Horizon 2020 Expert Group on Cultural Heritage*. Brussels. Brussels: European Commission. doi:10.2777/745666
47. Tourism's three main impact areas. (n.d.). Retrieved from <https://www.gdrc.org/uem/eco-tour/envi/one.html>
48. Towards an integrated approach to cultural heritage for Europe. (2014). Brussels: European Commission. Retrieved from [http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication\\_en.pdf](http://ec.europa.eu/assets/eac/culture/library/publications/2014-heritage-communication_en.pdf)
49. Training Manual. (n.d.). Inherit. Retrieved from <http://www.interpretingheritage.eu/en/outcomes/training-manual>
50. What is heritage interpretation? (n.d.). Retrieved from <http://www.interpret-europe.net/feet/home/heritage-interpretation.html>
51. Winter, T. (2012). *Heritage and Nationalism: An Unbreachable Couple?* Retrieved from [https://www.westernsydney.edu.au/\\_data/assets/pdf\\_file/0017/413630/ICS\\_Occasional\\_Paper\\_Series\\_3\\_4\\_Winter\\_Final.pdf](https://www.westernsydney.edu.au/_data/assets/pdf_file/0017/413630/ICS_Occasional_Paper_Series_3_4_Winter_Final.pdf)
52. Zeil, W. van & Beukers, G. (2017). *Nieuwe directeur Rijksmuseum breekt met verleden en maakt tentoonstelling over slavernij*. Amsterdam: De Volkskrant. Retrieved from <http://www.volkskrant.nl/wetenschap/nieuwe-directeur-rijksmuseum-breekt-met-verleden-en-maakt-tentoonstelling-over-slavernij~a4460392/?hash=7191bac6fd279199ba536753c2bd61214cf15a9b>

## Appendix 1 Examples of good practice

### England

| Good practice  | Innovative  |
|--|---|
| <p>An example for historic gardens is the Historic and Botanic Garden Trainee Programmes (HBGTP). It is an opportunity for passionate and committed horticulturists. You can earn a salary while developing your professional skills in some of the best historic and botanic gardens that the UK has to offer. <a href="http://hbgtp.org.uk/">http://hbgtp.org.uk/</a></p>  | <p>Focused on learning and on competence development</p>  |
| <p>Another example, of a HLF funded scheme is the Traditional Building Skills Bursary Scheme which has been set up to address the heritage skills shortages. It offered apprenticeships in a range of traditional building skills including carpentry and joinery, stone masonry, brickwork, painting and decorating, plumbing, roofing and metalwork. Each Apprenticeship allowed Learners to complete their vocational qualification whilst at the same time developing skills so they can work on historic buildings. <a href="http://www.buildingbursaries.org.uk/">http://www.buildingbursaries.org.uk/</a></p>   | <p>There are 6 million historic buildings in the UK and over half a million are listed. These buildings require another 6,500 people with specialist skills.</p> <p>The Traditional Building Skills Bursary Scheme has been set up to address the heritage skills shortages. By passing the knowledge and skills of our current master craftsmen on to the next generation secures the future of our historic buildings.</p>  |
| <p>In England, employer lead groups will develop new Trailblazers Apprenticeships. This includes a Historic Environment Practitioner Trailblazer Apprenticeships.</p> <p>In addition, Department of Culture, Media and Sport Cultural White Paper confers several key responsibilities to Historic England: to recruit heritage apprenticeships; to work with partners on apprenticeship standards; and to report on apprentices employed by grant awardees. <a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/510799/DCMS_Arts_and_Culture_White_Paper_Accessible_version.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/510799/DCMS_Arts_and_Culture_White_Paper_Accessible_version.pdf</a></p> | <p>A group of employers and organizations was successful in securing Trailblazer status under a Department of Business Innovation and Skills (BIS) scheme to establish apprenticeships in Historic Environment Practice.</p> <p>The proposal is to establish an overarching qualification - "Historic Environment Practitioner" - which will provide the basis for a number of defined specialist pathways:<br/> <i>Historic Environment Practitioner (Advice)</i><br/> <i>Historic Environment Practitioner (Investigation)</i> –<br/> <i>Historic Environment Practitioner (Management)</i></p> |

## Slovakia

| Good practice   | Innovative  |
|---|---|
| <p><b>The School of Crafts</b></p> <p>The Centre for Folk Art Production has three regional centres in the western, central and eastern part of country. These centres offer several courses for general public, organize exhibitions, workshops and they also have their own libraries specialized for literature about traditional crafts. The Centre for folk Art Production has also network of regional shops with traditional arts and crafts. Since January 2016 The School of Crafts has been inscribed on The List of Best Safeguarding Practices of Intangible Cultural Heritage in Slovakia.</p>   | <p>Identifying, preserving, transmitting &amp; sharing heritage knowledge and skills</p>  |
| <p><b>Traditional arts and crafts and contemporary design</b></p> <p>In the area of traditional crafts, The Centre of Folk Art Production looks for the way traditional crafts interact with contemporary design. The competition which serves this purpose is The Circles in The Water – an international competition of young designers whose inspiration and creation come out from traditional culture and respect of traditional techniques. This competition is organized with cooperation of Academy of Fine Arts and with several high schools and their students.</p>  | <p>Bringing together traditional crafts and emerging techniques in contemporary design.</p>   |
| <p><b>The unemployed in the restoration of the cultural heritage</b></p> <p>The Ministry has established a system of donations for safeguarding of cultural heritage, which is often used for supporting educational projects. For example, there is a program Renew your house, in which The Ministry supports projects of conservation, restoration and renovation of castles, fortifications, torsional architecture and historic parks in cooperation with unemployed people who are led by professional coordinators.</p>  | <p>The project shows, that this is an effective form of work, in which the unemployed gradually acquire new skills and renew their work habits. The implementation of the project has brought a significant positive effect on the preservation of the cultural heritage and positive impact on tourist development with following effects on the development of services related to tourism in all regions of Slovakia. The other (originally unexpected) positive effect is the effect of local patriotism and protectionism of cultural heritage in the regions, where the project was held. This project has been implemented in cooperation with The Ministry of Labour, Social Affairs and Family and has been financed also by European Social Fund.</p> |
| <p><b>Pro Monumenta – prevention by maintenance</b></p> <p>Pro Monumenta – prevention by maintenance is a project of The Monument Board of the Slovak Republic. This project aims to build a system of preventive monitoring of immovable national monuments. For this purpose three specialized crew were established, who monitor these national monuments. The integral parts of this monitoring are also practical examples of repairs and cleaning work. Inspection teams are equipped with modern diagnostic and measuring technique and can also work at heights. They elaborate a technical report on cultural monument and they provide a complex consultancy to the owners of monuments. The project also includes publishing manual and handbooks about traditional building technologies necessary for restauration of historic monuments. The project is financed by the EEA Grants.</p> | <p>The key aspect of this project is to involve owners, users of monument, plumbers, cleaners and everyone, who could cooperate in an early warning system. Building a strong relationship between people and community surrounding particular national monument and their local history, hand in hand with individual education oriented on specific focus group is a good way how to raise awareness of the cultural heritage – not only of its tangible parts but also intangible aspects (e.g. traditional craft techniques, procedures) – and how to preserve the immovable (construction, materials, architecture, landscape) values of national monuments.</p>   |

## Belgium (Flanders)

| Good practice   | Innovative  |
|---|---|
| <p>FARO, the Flemish interface centre for cultural heritage (movable and intangible) has developed a programme "<a href="#">Tijd voor vakmensen</a>"(Time for craftsmen) to develop new models to deal with questions like:</p> <ul style="list-style-type: none"> <li>• How can we attract young people to join the workforce?</li> <li>• How can we bridge the gap between higher education (with a lack of heritage programmes) and the work field?</li> <li>• How can we support starters to get a grip on the skills and knowledge needed in the work field? Thus, how can we develop a concise in-service training offer?</li> <li>• How can we help older and more experienced heritage workers to share their skills and knowledge with a new (professional) generation?</li> <li>• How can we help our existing workforce to face new challenges like digitalization, the rise of new government models, sustainability and so on? How can we stimulate innovation in our sector?</li> </ul> | <p>The FARO project consists of different programs and questions what is possible and needed to be more innovative.</p> <ul style="list-style-type: none"> <li>• It stimulates the competence to have eye for new technological developments and trends</li> <li>• Stimulate open mindedness and share innovative practices in an equal network structure</li> <li>• Develops cross-overs between industry and craftsman</li> </ul> |
| <p>FARO organised a <a href="#">trip to New York</a> where museum workers studied new participatory approaches.</p>   | <p>International orientation</p>  |
| <p>Every year FARO gives a <a href="#">course to starters in the cultural heritage sector</a> (basic skills and knowledge like: what is heritage? how can you write a business plan, how do you organise a meeting, ...)</p> <p>FARO supports heritage workers in writing their business plans: workshops, a <a href="#">blog series</a> and coaching</p> <p>The Flemish government issues <a href="#">grants for heritage workers to participate in job shadowing abroad</a>.</p>  | <p>Professional development, knowledge sharing</p>  |
| <p>A few years ago FARO organised "a <a href="#">reading club</a>" with <a href="#">heritage workers</a> to read and discuss the book "The participatory Museum" from Nina Simon.</p>   | <p>Participatory approach</p>   |
| <p><a href="#">A new grant is launched to promote the assessment of cultural heritage significance</a>. The holders of the grant are invited to join a community of practice in order to discuss their work in progress. Afterwards they will share their experience with other heritage organisations in Flanders.</p>   | <p>Reflection, co-operation and networking</p>  |



## Appendix 2 Traditional and emerging professions

The table below includes traditional and emerging professional positions found in job descriptions searched for on the Internet.

| <b>Traditional Professions</b>                      | <b>Emerging Professions</b>                               |
|---|---|
| Listing Adviser                                     | GIS Librarian   |
| Conservator Restorer/ Museum or Gallery Conservator | Map Librarian   |
| Explainer/Tour Guide                                | Social Media Content Coordinator/ Social Media Strategist |
| Librarian   | Listing Adviser   |
| Archivist   | Imager and Preservation Imager                            |
| Curator   | 3D-conservation expert                                    |
| Historic Buildings inspector/Conservation Officer   | Data Manager  |
| Archaeologist                                       | Multi-media and Graphic designer                          |
| Heritage Materials Analyst                          | Architectural Technologist                                |
| Heritage Horticulturist                             | Software developer  |
| Records Manager                                     | Web Developer, multimedia technician                      |
| Stained Glass Craftsperson                          | Augmented Reality Specialist                              |
| Technical Draughtsman                               | Social Media Specialist                                   |
| Art Handler   | Technological Conservator                                 |
| Collections manager                                 | Archaeological Illustrator                                |
| Plasterer   | Archaeological Scientist                                  |
| Stone Mason   | Aerial Investigation & Mapping investigator               |
| Thatcher  | Remote Sensing Specialist                                 |
| Carpenter   | Website Manager   |
| Heritage and historical worker                      | Head of Digital Media                                     |
| Loans registrar                                     | Digitisation Officer                                      |
| Exhibition Researcher                               | Digitisation Research Assistant                           |
| Inspector of ancient monuments                      | User Experience Designer                                  |
| Quality Manager                                     | Community and Education Engagement Officer                |
| Heritage at Risk Project officer                    | Digital Producer  |
| Historic Places Adviser                             | Programme Content Creator                                 |
| Rural Crafts Maker                                  | Research and Data Administrator                           |
| Wood Worker   | Communications Technology Manager                         |
| General Technician                                  | Database Assistant  |
| Conservator of works of Art on Paper                | Collections Decant Project Manager/Assistant              |
|   | Cataloguer (digital)                                      |
|   | Digital Research Forum Project Officer                    |