



Tourism, archives and culture: a digitally mediated relationship between preservation and experience

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- 3D digitisation, a question of quality
- New challenges
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- Tourism history and societal perspectives

Archives and tourism

- Travel guides
- Photo albums
- Flyers
- Posters
- Maps
- Ephemera, items which were not originally designed to be retained or preserved

Digitisation makes all this more accessible



Which is the purpose of digitisation?

The motivation to digitise cultural heritage is as diverse as the heritage itself.

Is the end consumer of the digital asset the cultural institution that owns and preserve the physical object?

Is the end consumer of the digital asset another organisation?

The use that the end consumer may have of the digital asset is unknowable.

While guidelines to run digitisation campaigns are becoming more and more available, if the purpose is not clear there could be instances where digitisation is not producing the requested results, e.g.:

- The format of the digital record is not adequate for its use
- The level of quality is not sufficient
- The supporting documentation that would provide confidence in the use of a pre-existing resource is not available

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Re-usability of digital contents

Use beyond the original use-case is what we mean with 're-use'.

Reusability of Digital Cultural Heritage assets, including digital assets from Archives, is a key factor for efficiency:

- To reduce production times
- To avoid duplication of efforts
- To save costs in equipment

How digital assets can be prepared for use beyond the original use-case can play a relevant role for the sustainability and preservation digital assets.



Are digital contents ready for re-use?

- There is a popular view that creative industry, researchers, educators, ... can harvest digital cultural assets and reuse them within their production cycle, as they have been produced during the digitisation process.
- This is not currently the case, and there are not many instances of major developments using Digital Cultural Heritage material in this manner.
- Either the asset is specifically digitised for development purposes, or pre-existing assets can only be used as guides or as information sources that need in turn to be further processed for being actually 're-used' in the development.

Partnerships can reduce the distance between creation and re-use

This distance between digital assets creation and their re-use must be addressed if the benefits of mass digitisation are to be realised.

Partnerships can help to cover this distance:

- Partnerships between the Cultural Heritage Institution committed to digitise its assets and the users identified as being consumers of the assets resulting from the digitisation would clarify the requirements in terms of quality, format, licences, and other features
- These partnerships will enable both parties to understand better their respective needs, expected benefits, and to promote the uptake of existing assets



3D Digitisation, a question of quality





The role of metadata and paradata

- The theoretical requirements to igniting re-usability of digital cultural assets is well understood and has been discussed for over decades, but the practical implementation are fragmented.
- One of the primary obstacles identified as hindering re-use of assets is the **level of confidence** in the method and rational of creation. This can be addressed through implementation of robust metadata and paradata associated to the digital cultural object.
- However, this is not a trivial process in asset creation, where the return on investment is often seen as brining little benefit to asset creators, especially where those creators are non-profit actor, e.g. Government Agencies, NGOs, Universities, GLAM and **Archives**.
- Incentivising asset creators to include accurate, quality and meaningful metadata and paradata beyond a mandated “minimum level” is a fundamental aspect.
- The problem becomes even more evident in the case of digital works of a three-dimensional nature.



3D Digitisation Guidelines: Steps to success

A guide based on the EU VIGIE Study on quality in 3D digitisation of tangible cultural heritage

DOWNLOAD IT



The Lambousa Fishing Trawler. EU ERA and UNESCO Chairs on Digital Cultural Heritage - Cyprus University of Technology. With the support and cooperation of the Municipality of Limassol



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Why digise in 3D?

Every object is unique and carries a significant value in the story of humankind.

3D digitisation is a valuable tool in recording an object's memory for posterity.

It is important to capture this professionally, correctly and as thoroughly as possible to avoid losing the narrative for the benefit of future generations.

To meet the needs for the protection, long term preservation and the maximum number of end users, it is highly recommended to digitise at the highest quality available, which includes recording as much information (MetaData, ParaData) and Data (Geometrical Data), as possible.

This will increase the usefulness of your efforts and support the monitoring and digital preservation of your content.



A note on quality

Quality is not simply measured by the output resolution and accuracy of 3D models. Equally important is the **completeness** of the data records that relate to the object and the digitisation process.

At its simplest an object can be transferred by a single individual into a 3D model using a mobile phone which can be published online, all in a matter of hours. However, the potential of protection, preservation and reuse for these basic models, either for research or promotional purposes is very limited.

In contrast the **highest level of complexities** will need coordinated teams of experts, capturing several different aspects, using specialist **high-definition capture systems**, in **environments** which can either change over time or suspend any form of digitisation for any given period.

This implies higher investments but offers **results that are truly reusable** by different communities of stakeholders (researchers, architects, engineers, creative industry, tourists, educators, general public...) and that grants a long-term preservation of the 3D model.



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New challenges



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Challenges in the digital space

- **Protecting European identity, heritage and values** from misappropriation (by design or accident) can represent a significant step forward a safe Digital Cultural Heritage space
- **Rights management and copyright** control are needed, and this is becoming more complicate for 3D digital assets
- Implement re-use of digital cultural assets when **adopting forms of automation**
- Protocols and systems are needed to say where digital assets can be cited within traditional **scholarly publications**
- **How cultural digital assets can be re-used within the emerging virtual worlds**, namely for **tourism**



Europeanization and cultural tourism

Culture and cultural heritage can have a primary role in conveying a sense of belonging among European communities, they have a great potential to strengthen relationships and cohesion between European communities, building on common roots and values

This potential is exacerbated by the significance of tourism in Europe.

Cultural tourism linked to culture and cultural heritage, would represent a process that indirectly may influence and reinforce social and cultural Europeanization

Cultural tourism offers a vehicle for promoting shared value, generating benefits for local destinations to introduce their cultural variety to interested visitors, creating interests for visitors to learn and appreciate similarities and differences across European countries.

To achieve these goals, there is a **strong need of contents**.



Culture, communities, environment and tourism

On both the European level and on national levels, tourism is often combined with policy fields (i.e. economics) that are different from those of culture (frequently residing with education).

On the contrary, particularly in the European context, culture and tourism are strongly intertwined and dependent upon one another for successful development.

Furthermore, lack of recognition of the role of tourism in the Green Deal and lack of explicit lines in Structural Development Fund programmes reduce and miss opportunities of sustainable development in the sector.

This can lead to underestimate the relationship between tourism and culture, the potential of tourism and its **significance for local communities and visitors.**



Maximise impact of heritage digitisation

The European Commission highlights that the momentum is now to preserve our culture and cultural heritage and bring it to this digital decade.

European Commission published in November 2021 the **Recommendation on a common European data space for cultural heritage** (2021/1970).

This Recommendation encourages Member States to put in place appropriate frameworks to enhance the recovery and transformation of the cultural heritage sector and to support cultural heritage institutions in becoming more empowered and more resilient in the future.

This will lead to higher quality digitisation, reuse and digital preservation across the EU, and have **spillover effects in other key sectors of the European economy, such as tourism**, education, research, and cultural and creative sectors.

Cultural tourism could contribute to maximize the impact of the heritage digitization investment.



Digital promotion and dissemination

Digital promotion and information dissemination play an increasingly important role in the tourism sector, and can help to enhance the visitor experience, improve sustainability, and support the growth of the sector.

To foster digital promotion and information dissemination, it is important to develop and implement effective policies and strategies.

- To support the development of digital marketing and promotion tools, such as social media campaigns, mobile apps, and virtual and augmented reality experiences
- To support the development of digital content and information resources, such as online guides, maps, and cultural heritage databases

Culture, tourism, ICT and their mutual interactions and applications offer a tremendous potential for the digitization of cultural heritage, thus largely affecting the way cultural products are produced, assessed, consumed, managed, and promoted for tourists.

All these developments need contents!



Innovation to produce new services

Unprecedented opportunities brought by technologies, such as Data, AI, 3D, and XR bring cultural heritage sites back to life.

Virtual museums offer visitors the possibility of seeing art works in context and experiencing objects or sites inaccessible to the public.

The transformation of the sector results in easier online access to cultural material for everyone.

The output of the digital transformation means to bring innovations in the modes of service delivery, in the forms of direct interactions with customers, in the proliferation of smart products that enable real-time monitoring and updating, in the creation of services that transform the relationship with customer.

Innovations in the preservation of cultural heritage are crucial to the development of the tourism sector and to ensure competitiveness in tourist destinations.

All these innovations need contents!



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Visit the margins



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Tourism in remote areas

Despite the remoteness, less-known areas can be particularly rich in tangible and intangible cultural and natural heritage.

The 21st century tourists are not anonymous tourists, totally alien to the territory, who are taken from one "spot" to another without their consent, who buy standardised low-quality products and who will not come back, sucked in by the thirst for new destinations with an ever-higher carbon footprint. This paradigm shift is becoming more pronounced with the climate transition and its negative effects (pandemics, depletion and discrediting of fossil fuels, etc.) accumulate.

Digital infrastructure, digital tools and smart data management can enhance the accessibility and sustainability of remote and less-known cultural sites.

Research should highlight how to collect and use tourism data especially in remote areas, as well as which new infrastructure, services, tools and investments can be leveraged to enhance the digitalisation of remote cultural sites and their attractiveness.



Promoting peripheral destinations

Opening up communities to display their unique strengths and local identities to interested visitors may improve confidence, support broader world-views and if developed with respect for cultural rights holders, can give a sense of ownership and pride.

The contents from the archives can offer knowledge on how local identities historically developed through shared and diverging underlying frameworks of values.

However, to introduce tourism successfully and in a sustainable way, clear demonstrators, **training programmes and guidelines** are needed on:

- Sustainable business models
- Improving the ability to re-use archival resources
- Transforming heritage into stories to be narrated also on the digital platforms

Training mechanisms can produce twofold results:

- To activate local heritage communities in co-developing methods in collaboration with cultural institutions
- To adapt these mechanisms to local contexts and to facilitate the spread of good practices



INCULTUM Pilots

- INCULTUM stands for INnovative CULTural ToUrisM in European peripheries. It is a Research and Innovation action co-funded by the European Union under the Horizon 2020 Programme. The project spanned three years, from May 2020 to April 2024.
- 15 partners from 10 European countries
- Cultural tourism organizations, local interest groups, communities, cultural and natural parks, municipalities, associations, universities, SMEs, data managers, developers, dissemination networks between EU cities, development and consulting groups.





Aaos Valley

- A new platform for mapping the area's natural, social, cultural and productive resources.
- The database construction was based on a participatory approach, remaining open to new inputs collected through questionnaires, free text, registrations and comments.

The platform was conceived with a twofold scope:

- firstly, as an evidenced-based decision-making tool
- secondly, as an interactive tourist guide for the area, enabling locals to organize, visualize and present touristic experiences.

Data source: Citizens and stakeholders' participation



Upper Vjosa Valley

- Tangible and intangible heritage of the historic nomadic Latin-speaking Vlach community, including their transhumance routes and seasonal pastoral settlements
 - Archaeological, historical and natural sites
 - Traditional villages
 - Byzantine and post-Byzantine churches
 - Military and industrial remains
-
- Social media
 - Downloadable GIS/GPS data
 - Virtual guided tours

Data source: research and archaeological data



Ancient paths at Bibracte-Morvan

- Participatory inventory of the territory's heritage and its dense network of public tracks and paths
- Estimated at 12,000 km in the territory of the Regional Natural Park of Morvan

Data source: official public maps
+
Participation of local communities





Mining treasures of Central Slovakia

- An important mining settlement that developed since the Middle Ages
- In the Late Middle Ages the Fugger and Thurzo families founded the prosperous, largest, and most modern early-capitalist company of that time
- The pilot: a cross-cutting action within two tourism routes, the Barbora Route and the European Fugger Route
- Interactive digital map to present most important mining sites available for individual tourists and agencies, and offered to schools for educational purposes

Data source: Participation of students, citizens and stakeholders



The potential of cultural tourism

Europe has held the first spot in international tourism arrivals since the advent of mass-market tourism in the early 1950s.

Due to its valuable, diverse, authentic, and well-preserved cultural heritage, **culturally-inspired tourism is one of the main types of visits.**

The potential of Cultural Heritage and Cultural Tourism as a competitive regional advantage and production factor in local wealth creation has been recognized and supported by various EU policies, funding and research programmes.

The digital transformation changed tourism itself by fostering new commercial, marketing, and organisational models, and has made it easier to shape new tourist experiences in terms of education, promotion of cultural diversity, and accessibility.

The interaction of commercial and cultural dimensions is producing a re-design of tourist destinations.

Access to a variety of online archives as well as the emergence of new social, economic, and environmental challenges is stimulating **new research questions and interpretations.**



Tourism history

- Role of tourism in Europeanisation
- The digitalisation of historical materials has deeply impacted methodologies and approaches
- Apart from macroeconomic series (GDP, balance of payments), digitalisation has also fostered the creation of new datasets focussing on specific tourist products

Application of GIS to tourism history:

- The combination of GIS, historical sources, and 3D virtual reconstructions can be used to reconstruct cultural landscapes that do not exist anymore (e.g. the walls of Girona, the transhumance routes in Albania, the history of the Fugger and Thurzo families in Slovakia, the Celts paths in Morvan, the traditional villages in the Greek Epyrus) and that can tell again stories to the visitors
- Similarly, the reconstruction of cultural landscapes can represent the digital territory where remains of tourism history can be placed to track how people moved around our territories in the past, what they did, which are the traces that they left



Multidisciplinarity, multiple perspectives

Digital transformation requires acquisition of **mixed competences** and collaboration between disciplines:

- the collaboration between historians and geographers
- the collaboration between history and the creative industries
- the interest in history by economists to explore the possibility of applying models and statistical techniques to historical analysis

The mix of **analogue and digital sources** provide deeper and more extensive interpretations.

New datasets can be used by scholars of different backgrounds in new research to assess the social, cultural, and environmental impact of tourism.



Thank you
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