How to

Facilitate the Cooperation between Humanities Researchers and Cultural Heritage Institutions

GUIDELINES

How to Facilitate the Cooperation between Humanities Researchers and Cultural Heritage Institutions

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Researchers and Cultural Heritage Institutions – collaborate!

Background

The changing nature of research within the humanities which has been brought about by digital technologies requires novel forms of cooperation between researchers and **Cultural Heritage Institutions** (CHIs). Here, researchers are understood to be, in the broadest sense, digital humanities researchers, museum curators, citizen scientists, etc.; that is, all parties interested in using cultural heritage resources. CHIs are no longer (if they ever were in the first place) mere providers of content for researchers, but have become equal partners and important stakeholders in research activities. Many digital endeavours in the field of cultural heritage are both activities for preservation and for research. The availability of digital tools which allow novel approaches to the material stored in CHIs enables the further reuse of digitised materials. On the other hand, researchers may provide new data or enrich existing resources through their scholarly activities, which in turn may benefit CHIs.

In recent years, we have experienced a rapid growth in the number of cultural heritage resources that are accessible online – some in high resolution – with clear legal status statements and formats that allow unrestricted reuse. There is a growing need for, 1) improving access to those resources which lack clear legal status statements, open policies, or formats that allow free and unrestricted use; 2) promoting these resources' potentials among academic communities across Europe; and 3) instructing users on the terms and conditions for reusing these resources.[1] This question of enabling the reuse of cultural heritage data has been the focal point of many debates and initiatives, for example, the 'Heritage Data Reuse Charter,' and the 'FAIR Guiding Principles for scientific data management and stewardship.' This document aims to provide advice as well as some examples on how to incorporate these guidelines into the actual workflows of institutions and researchers.

Goal

The overall objective of this report is to support collaboration between humanities researchers (literary and cultural studies, history, arts) on the one hand, and cultural heritage institutions on the other, by raising awareness about the possibilities for reusing heritage resources in academic settings and increasing the visibility of online heritage collections. This publication aims to provide both cultural heritage institutions and researchers with know-how, examples of good practice which will enable and strengthen collaboration between both sides, and enable a greater circulation and reuse of heritage resources within the academic field.

This document was prepared during a hands-on workshop for representatives of the European academic community and heritage professionals who are working to share their collections online in order to promote digital methods and the academic reuse of heritage content. We engaged humanities researchers who expressed an interest in exploring digitised cultural resources, and heritage professionals who create internal institutional policies for providing access and sharing resources online. The workshop took place at the Digital Humanities Centre at the Institute of Literary Research of the Polish Academy of Sciences in Warsaw (Poland) on 19–20 June 2018. Invited experts included Natalie Harrower (Digital Repository of Ireland), Mark Sweetnam (Trinity College Dublin), David Brown (Trinity College Dublin), and Marcin Werla (Poznań Supercomputing and Networking Center). Twelve participants from various European countries were recruited through an open call for contributors (they are listed as co-authors of this document). The workshop participants explored the main problems associated with heritage reuse in the context of their expertise and later translated those discussions into this document through a 'book-sprint,' which was facilitated by Kamil Śliwowski. The workshop and the preparation of the guidelines were funded by a DARIAH Theme 2017 grant, which was awarded for the project 'Facilitating Cooperation Between Humanities Researchers and **Cultural Heritage Institutions**,' jointly proposed by the Institute of Literary Research of the Polish Academy of Sciences, Trinity College Dublin, and Creative Commons Polska.

Benefits

Cooperation may be beneficial for both sides. In the case of CHIs, it may generate more interest in their resources, which often translates into new funding or opportunities for cooperation. Moreover, tangible proof of the reuse of a CHI's resources may be an asset for the institution as a documented example of the CHI's impact, which is often crucial for reports or funding applications. Reuse of the

1 See, for instance, the European Commission Report on Bringing Europe's Cultural Heritage Online (July 2016); Karol Jan Borowiecki, Neil Forbes, Antonella Fresa eds. Cultural heritage in a changing world. Springer, 2016; Gill Hamilton and Fred Saunderson, Open licensing for cultural heritage. London: Facet, 2017. Benardou, Agiatis, Erik Champion, Costis Dallas, and Lorna M. Hughes. Cultural heritage infrastructures in digital humanities. Routledge 2018.

resources also contributes to their sustainability as they become available in other contexts, projects, and databases. In the case of researchers, their work (e.g. the data they have prepared) can be given to CHIs and showcased, and later be reused by the scholarly community. It is quite common for researchers to turn to CHI staff for help with finding material they are working on; but it also works the other way around: researchers may also support CHI staff using their expertise on certain resources, for example, by targeting materials which should be prioritised for digitisation and advising on the formats to be used. Another opportunity arises when an institution holds some resources which have not been standardised or catalogued, and the researchers can perform this much needed work while conducting their own project. The mutually beneficial outcome would be that the institution may have its resources standardised and made accessible, while the researcher is able to publish the results of this archival work.

Finally, such cooperation may result in a synergy which makes it easier to influence strategic priorities and policymakers to commit funding and staff to facilitate the work required within CHIs, as the staff on the ground (archivists, curators, registrars, documentation officers etc.) are not the people who decide what resources are committed to digital projects.

The EU is increasingly moving towards open data sharing, and structuring open data for better reuse. These policies affect all researchers and CHIs in the long term, hence these recommendations also aim to create an awareness of changes in the policy landscape. For further reading, look into the EU's activities in the areas of Open Science and Reuse of Public Sector Information. The recommendations and examples in this report acknowledge these changes and provide recommendations that support their adoption.

The structure of this book

This book contains recommendations and examples of best practice. The recommendations were proposed and discussed by workshop participants and they aim to provide a framework for successful cooperation between researchers and CHIs.

These recommendations are assigned to three main groups which are dedicated to:

1. collaboration strategies,
2. data standards,
3. communication.

Each recommendation is followed by selected examples of good practice which highlight the aspect of the project that is relevant to the discussion.

Additionally, this book features seven examples of successful projects that have been conducted as a cooperation between researchers and CHIs. Each case study follows the same structure: the details of the cooperation and its benefits, the resources used in the project, its uniqueness, and tangible proof of its reuse. We think that these snapshots, which depict entire workflows, may serve as an inspiration for our readers.

We encourage readers to explore the projects described here and apply similar approaches in their own endeavours, or at least reflect on the paths taken by others.

2

Collaboration strategies

Both CHIs and researchers need to acknowledge that CHIs are not mere resource providers but have become not only an important stakeholder but also a facilitator of the research process. Equally, researchers add value to the collections by enriching data and providing new ways in which to use the material. In this respect, researchers and CHIs should work together to:

- prioritise digitisation plans,
- design and implement digital repository development plans,
- develop new services for researchers.

Recommendations for CHIs

In order to perform this role for the research community, CHIs need to implement some feedback mechanisms based on a user-driven approach

This would allow them to monitor, evaluate, and respond to their users' needs. Institutions should develop **a clear outline of how to foster such collaborations,** and nominate a contact person, so researchers have a clear idea of how to approach the institution.

An example of this sort of fruitful cooperation involves the National Museum of Ireland's Collections Resource Centre. Researchers are encouraged to contact the Museum during the initial stages of their projects in order to cooperate in setting up access schedules. Active engagement with researchers encourages the creation of digital data, as achieved with elements of the Discovery Programme research organisation's 'Digital Replicas Project,' which is focused, in part, on the National Museum of Ireland's collections (a brief introduction is available on their website). There are also many individual researchers actively working at this museum facility. Similarly, the Europeana Research Grants Programme encourages researchers to use Europeana data in their own projects. Successful examples of other such collaborations include a 'virtual research environment dedicated to born-digital and digitised scholarship in music,' a project focusing on spoken performances of nineteenth-century French poetry, and an investigation of Danish colonial heritage through interactive maps.

Another interesting example is the cooperation between the Stanford Literary Lab and Stanford Library which facilitates access to the full-text resources needed in the quantitative study of literature. It is not only librarians who ensure that the digital texts acquired by the library are licensed properly so that they allow text mining, but also library staff attends lab meetings and sees how the textual resources are used for research – this deepens their understanding of researchers' goals.

Successful cooperation is also established in joint digitisation initiatives in which researchers and CHIs work together to identify and digitise particular content. For instance, 'The Greek Revolution of 1821: Digital Archive' is a project within which several institutions work together to digitise those sections of their archives which relate to the Greek independence revolution, on the occasion of its two-hundredth commemoration. In the same manner, the Heritage Maps Dublin County Archaeology Project fosters collaboration between various institutions and researchers in order to digitise Dublin's archaeological record, particularly following the 20 years of intense commercial archaeology on the back of Ireland's building boom.

Researchers' needs should be taken into account, not only in content acquisition or reuse strategies, but also in the CHI's digital infrastructure development cycles. Such needs should be assessed using standard user-analysis methodologies in much the same way they are applied in software development. A good example of this type of feedback loop in infrastructure development is the case of the Polish Digital Libraries Federation, a metadata aggregator which provides access to around five million cultural heritage objects from over 120 Polish websites (digital libraries, museums, and archives). Portal Developer – Poznań Supercomputing and Networking Center (PSNC), regularly takes into account users' needs by using web analytics and yearly surveys distributed among users. The results of these surveys are published and used to define further development plans. For instance, survey results have led to the development of a dedicated thematic newspapers' portal which has been built on top of the main FBC database. The portal includes tailored features for searching and browsing through newspaper titles. These features are not available on the main FBC portal, which gives results on the level of single newspaper issues.

Researchers need to specify their needs

CHIs, for example, libraries and archives, need to prepare their metadata and data in the most universal form possible so they can accommodate different uses in the future. If researchers let CHIs know exactly what their needs are (e.g. a particular file format or a specific set of digitised manuscripts) it is often easy to obtain the requested materials. If a research project entails document scanning, this should not be attempted by the researcher, but rather be accomplished in cooperation with the CHI that holds them. This ensures the standardisation of the process as well as the future reuse of the digitised output, and last but not least, the long-term archiving of the output.

The priorities of professionals in institutions are often different to those of researchers, however, **in order to cooperate fruitfully, they need to know each other's needs**. A good example of tailoring data to researchers' needs is the cooperation between the Polish National Library and the Institute of Polish Language at the University of Warsaw in the development of tools for analysing nineteenth-century texts in Polish.

Efforts should be made to understand the needs and agendas of CHIs and their audiences – how can researchers help?

Researchers should follow CHIs on social media, read their blog posts and press releases, look at their digital policies, take part in workshops, and meet with CHI professionals. All these actions will allow an understanding of CHIs' needs, concerns, and aims. Establishing a mutual understanding and a **working relationship** will enable cooperation and the subsequent dissemination of results. GIFT is an example of such practices: museum professionals and researchers meet in a workshop environment to gain mutual understanding and establish a shared agenda. Similarly, researchers should inform their CHIs about their research agenda and plans for working with collections, as it may facilitate planning or joint applications for funding.

Researchers should be aware that their output may be research data which CHIs can use

Given both the discipline's specificity, and the dominance of the printed monograph as the primary form of research output, researchers in the humanities are not used to treating their results as research data. Although scholarly editions, manuscript transcriptions, bibliographies, lexicons, calendars, and so forth, are all potential sources of data for other researchers, they remain trapped in printed form, or basically unavailable because they are stored on researchers' hard drives. In order to allow others to access and use these resources for various research purposes, including data mining or corpus analysis, **the data should be prepared in a standardised and accessible way**.

A tool that provides great guidelines for the preparation of the researcher's own data is the DARIAH Standardization Survival Kit (SSK), which focuses on giving humanities researchers access to standards in a meaningful way by using research scenarios which cover all the domains of the humanities, from literature through to heritage science, including history, social sciences, and linguistics. These examples have been created by domain experts from real life researcher-oriented cases which have been divided up into various steps, each involving specific tasks. These scenarios can be seen as a living memory of what should be the best research practice in a given community, made accessible and reusable for other researchers wishing to carry out similar projects but who are unfamiliar with the recommended tools, formats, or methods. It is a set of standards and tools to be used by humanities researchers, presented in the form of case studies which show how the use of standards-based tools and data formats improves re-

search possibilities. Most of these scenarios also stress that the final results of the research process should be reusable and, ideally, open. We will return to the question of standards in the next chapter.

Researchers do not always need to publish data by themselves, as their datasets may serve as valuable assets for a CHI. The research output of a given project may enlarge and enrich the CHI's holdings. Austlit, an online bibliography of Australian literature, is an example of harnessing research efforts in order to expand a CHI's own collection. Austlit encourages researchers to use their bibliographical data for research, but also provides an interesting feedback mechanism for publishing research output in the form of curated collections of publications which include extra material and metadata that has been enriched by researchers. For example, the Banned in Australia collection features books that were once prohibited in that country. In this system, scholarly articles and commentary are accompanied by extended descriptions of these books, which in turn feed back into the Austlit database. Users may access both the scholarly content and bibliographical lists through the same service.

Successful collaboration requires additional, initial work to identify and challenge legal and structural obstacles

The nature of the cooperation between researchers and CHIs is often constrained by structural and legal challenges. The success of the cooperation depends on **acknowledging and addressing the different regimes in which researchers and CHIs operate**. This work should be done while establishing the cooperation in order to solve possible future problems or misunderstandings. For example, in Poland there are separate ministries for culture, and for research, each of which create their own, separate funding schemes for CHIs and researchers. In the absence of a common set of regulations, both ministries have different expectations in terms of standards, as well as for depositing and reusing research results.

Both researchers and CHIs should be clear about their goals and the ways in which they want to publish, store, license, and attribute the output of their projects. It may be useful to work out a 'data management plan' (DMP) for the collaboration, or at least discuss those points which are relevant to the project and agree upon crucial issues. There are many online guides designed to streamline the DMP creation process (DMP Online may be particularly helpful). It is crucial, however, that this process precedes the collaboration and is addressed at the proposal-writing stage so as to avoid misunderstandings. Both parties should work together, on equal terms, at the design stage to identify and propose ways in which to manage any problems that may occur in the future.

3

Standards and FAIR open access

In the previous chapter we learned why standards are important for cooperation and data reuse. While we can probably agree that this is the right thing to do, the problems start when we move from theory to practice, and need to identify the actual standards for our data which will cater to both CHIs and academics' needs. This is where the FAIR principles framework comes in handy.

FAIR[2] data: facilitating data exchange between researchers and CHIs

While the 'open movement'[3] has gained momentum within the research landscape, many stakeholders in the cultural heritage sector have reservations about opening up digital cultural heritage with few or no restrictions. This is both true for institutions who hold collections, and researchers who have invested substantial resources in investigating the material. For successful and sustainable work with cultural heritage data, it is crucial to understand that 'opening up' data, that is, making it publicly available to everyone online, is not the primary goal of either the researchers or the CHIs; for both groups, it is much more important that the data they have created are FAIR: findable, accessible, interoperable, reusable. When the data they have created matches these criteria, both researchers and CHIs can rely on the sustainability of their work, thus ensuring the data creation process will not have to be repeated in the future. If interested parties are able to '**Find**' data (be it data they have originally created themselves, or data created by another stakeholder) through publicly available information ('metadata') about the existence of that data; '**Access**' it to check if it might be useful to them, and '**Reuse**' it thanks to '**Interoperable**' formats, rich descriptions, and appropriate licensing; then the most efficient use of the data is assured even if it is not openly available online. It is understandable that some data restrictions may exist, or exist for a period of time, so **FAIR data should be 'as open as possible, as closed as necessary'**.[4] In any case, it is vital to ensure that data are always attributed with an appropriate, standard license (such as Creative Commons) in order to make sure that the possibilities and restrictions which affect their reuse are immediately evident to all interested parties.

For the reasons outlined above, there should be a general movement towards implementing FAIR data in the humanities (and not least for the rather pragmatic reason that FAIR is rapidly becoming the minimal requirement for accessing European funding).[5] CHIs can equally participate in these funding opportunities if their data, or data creation processes, match the criteria; it would, therefore, be very forward looking for cultural institutions to follow FAIR standards. Researchers will, of course, have to stick to the same standards in order to facilitate the exchange and communication of data.

If data are truly FAIR, it is easier for everyone to use them because they are structured using common standards. Thus, FAIR data enable researchers to actively contribute to CHIs' data collections, and for CHIs to make use of data created by researchers. With reference to the open movement, Pomerantz and Peek have made the argument that creating open resources in research will lead to a 'snowball effect'[6]: openly available resources will be used by others, who will, in turn, create more openly available resources, which will again be used by others, and so on. The same is true for FAIR data: **FAIR data will allow others (researchers or CHIs) to build on existing datasets and enhance or enlarge them, which will lead to a larger amount of data available, which will in turn enable further research**. The same mechanism will take effect in the visibility of the work being done: publicly available collections will increase research engagement with the collections and lead to publications about them; which will, again,

2 FAIR – Findable, Accessible, Interoperable, and Reusable. For guidance on FAIR data, see the report of the European Commission's expert group on FAIR data: Turning FAIR into Reality https://doi.org/10.2777/1524 Case Studies of FAIR implementation in the Netherlands (focus on education and research but still useful): https://zenodo.org/record/1250535

3 There are various elements to this 'movement' within research and higher education: Open Access, Open Data, Open Research, Open Science, are all aimed at making publicly funded output more available.

4 See Hodson, Simon, Jones, Sarah, Collins, Sandra, Genova, Françoise, Harrower, Natalie, Laaksonen, Leif, … Wittenburg, Peter. (2018). 'Turning FAIR data into reality: interim report from the European Commission Expert Group on FAIR data' (Version, Interim draft). http://doi.org/10.5281/zenodo.1285272 – page 6

5 For example, see: http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf

6 Pomerantz, Jeffrey / Peek, Robin: 'Fifty shades of open' In: First Monday, [S.l.], 4/2016. http://firstmonday.org/ojs/index.php/fm/article/view/6360/5460

increase the visibility of the collection for the broader public. Thus, CHIs can facilitate greater engagement with their collections through researchers by following the FAIR data principles. In turn, academic research can help to increase public interest in CHIs' collections, which should ultimately expand their audiences as well as add to their value proposition (preservation of cultural heritage, the need for government investment). The online availability of CHI collections is beneficial for all stakeholders: research shows that the open, online availability of heritage collections 'significantly increases use and awareness of an institution's collections, and contrary to concerns, has not led to any significant loss in revenue.' [7]

Recommendations for CHIs

CHIs should make their data as FAIR as possible

CHIs should consider making their data as FAIR as possible, as soon as possible (even if the data are not openly available) so as to enable researchers to have better use of the data. In order to do so, CHIs should assign their data permanent identifiers, implement widely recognized standards with their data, that is, metadata formats, and include rich metadata description. They should also provide APIs for their services so that the use of resources can be automated. **Interoperability saves money and makes further (re)use easier**.

Successful implementations include the Bodleian library (IIIF implementation); open data in the APIs' of the national libraries of France and Poland; as well as the Polona digital library's open API, and the textual corpora of Polish Literature of the 17th and 18th Centuries, which are based on TEI standards.

Copyright information should be included

Copyright information and licensing should be as explicit as possible for the data being shared. For example, if an image from a collection is put online, **the viewer needs to be told who owns the copyright, and what kind of reuse is allowed**. Creative Commons licenses are recommended whenever possible; and public domain material should be recognizable as being in the public domain (using a PD mark).

The work of researchers should be attributed

If researchers have contributed to a CHIs' data collection, they should be attributed. This will increase their motivation to share their research with CHIs, for example, by enriching the metadata on objects that CHIs may hold.

Recommendations for researchers

Researchers should contribute to institutions while using their data

Researchers working with cultural heritage materials can contribute back to the institution, for example, by providing the institution with enriched metadata based on their research. In this way **their work has an immediate and tangible value for the institution because the resources have richer metadata and are more accessible for audiences**. Moreover, other researchers will not have to repeat this work when using those resources.

7 Effie Kapsalis, *The Impact of Open Access on Galleries, Libraries, Museums, & Archives*, Smithsonian Emerging Leaders Development Program April 27, 2016, http://siarchives.si.edu/sites/default/files/pdfs/2016_03_10_OpenCollections_Public.pdf

Researchers need to think of both the input and the output of their research as research data

Humanities scholars should consider both the input and the output of their research as research data (e.g. images and texts which are used in conducting research, are data). **All the materials they have used for research can be considered research data and as such could be further reused** by other scholars – but not if they are locked away in someone's drawer or hard-drive. What some scholars consider to be the preliminary stages leading to actual research (e.g. annotating a manuscript) may serve as important input for other projects.

A data management plan should be created

Researchers should create a DMP when starting to develop a project concept, and consider how the data that will be created can be made sustainable by being included in the CHIs data collection. If a researcher plans well in advance, the output of the project may consist not only of the publication but also of the data, which may be shared with the scholarly community, increasing the project's impact. The advantage of having a DMP before starting research work is that there is a clear understanding of what data should be preserved for further reuse.

4

Communication and dissemination

Communication is an important factor in showcasing existing collaborations, but it is also a tool for presenting interests, needs, and procedures that may be helpful in finding new partners.

Recommendations for researchers

Researchers need to tell the world about their research and collaboration

Researchers usually communicate their research to academic audiences, for example, through conference presentations and journal articles, but it is also important to communicate it to wider audiences in order to illustrate the impact, innovation, and importance of their work. Such an approach may help the public understand the work researchers do, and enable them to engage with it through asking questions. It is also important to show current and potential funders why funding research is important. Having a record of communication activities relevant to their work may help researchers' careers in the future. A good example of successful communication concerning the collaboration between CHIs and researchers is the case of Emily Pringle, who is currently working closely with TATE London and regularly blogs about how research is undertaken in art museums; in turn, her website is also promoted by TATE.

There are many different channels researchers can use to communicate their work:

- **Blogs**
  Researchers can create a website with basic information about their project or collaboration, or start a blog on their Facebook page to regularly post about progress. Scholarly blogs can also be set up in an existing community like Hypotheses. A good example of using blogs for communication purposes it this post showcasing an event by EMOTIVE project.
- **Social media**
  Researchers can also share links to their websites, blogs, or blog posts through platforms such as, for example, Twitter, Facebook, Academia, LinkedIn, ResearchGate, or Instagram.
- **Interviews**
  Another avenue is for researchers to contact their local radio station, or a relevant podcast, suggesting an interview with the researcher and their CHI about cooperation – they are often looking for ideas.
- **Articles**
  Articles can reach a wider audience and can be written for relevant (non)academic publications such as a university newspaper, local newspaper, magazine, online magazine, etc. There is no telling who might have a great story to tell.
- **Events**
  Taking part in events might give researchers an opportunity to speak about their work to wider audiences, for instance, at festivals, coffee mornings, PubhD, European Researchers' Nights, Museum's Night, and so forth.
- **Newsletters**
  'News items' that introduce a scholar's research and findings can be sent to relevant newsletters, asking for publication.

Recommendations for CHIs

Clear rules of access need to be established for collections

Researchers constitute a significant part of the CHIs' audience. Through their work with cultural heritage data, researchers attach contextual depth and breadth to CHI collections, and provide valuable proof as to why CHI collections should be safeguarded and their guardians funded.

A good example of a collaboration platform is VARI, the V&A Research Institute, which allows the institute to experiment with new ways of studying, displaying, and storing its collections in more accessible ways. It sets out a clear framework for collaboration which serves as a clear starting point for prospective collaborators (e.g. https://www.vam.ac.uk/research/projects/showtellshare).

CHIs should provide information about what they have digitised and what is available for reuse

Sometimes a lack of cooperation stems from an insufficient knowledge among researchers about CHIs' holdings and their rules for reuse. CHIs should be open and clear in providing information about the details of available data. Best practice includes providing direct links to data repositories, providing examples of research carried out using researchers' data, and frequently updating information. Such practices enable better access to collections, and **clearly stating their conditions of reuse may save time and hassle for both parties**.

For instance, the Ashmolean, the Museum of Art and Archaeology at the University of Oxford, provides clear information about what they have digitised, as well as being fair and open about their terms of reuse. Under each digitised object (e.g. this one) there are icons allowing for contact, ordering image, printing or sharing the recors. Similarly, the National Archives of Finland provides direct links as well as instructions on how to access collections in multiple languages. FINNA – a project that brings together digitised collections of Finnish archives, libraries, and museums – provides links to CHI pages; it also features a filterable search engine based on terms of reuse, For instance, 'Free to use material.'

CHIs need to be open to new collaborations and invite researchers to their institutions

It is a good idea for CHIs to organise workshops, research fellowships, and training sessions for individuals and groups so that the researchers can get to know the CHI better and be encouraged to ask specific questions about its collections, activities, and services. A good example of such an approach is MiMoRa, the Mission and Modernity Research Academy of the University of Leuven (Belgium), a dedicated programme for rekindling interest in this research topic, which stimulates research in collections and sources kept at KADOC-KU Leuven and the University Libraries. Electronic means of communication can also be used to generate interest in collections. For instance, Biblissima, displays historical library collections and the history of manuscript transition within Europe.

CHIs' holdings and facilities should be publicised

The creation of a **communication plan** will be helpful in providing and guiding a coherent communication strategy. CHIs need to give attention to the communication and promotion of their collections and digital resources, as well as set communication objectives, target audience(s), media channels, and evaluate the results. Mass media should also be involved by selecting the most suitable media organizations, radio and television programmes, cultural newspapers and columns, digital media, and addressing journalists involved in cultural issues. Messages can be made exciting and worth knowing. CHIs need to be visible on social networks, and build user communities and communicate with them.

The British Museum provides clear details about the services and facilities they offer in a dedicated section of their website. Similarly, the V&A, a museum of art and design, is a good example of a larger CHI with a clear communication plan which has set communication targets and clear guidelines for the press. Ditchling Museum, on the other hand, serves as a good example of a smaller CHI that is able to communicate the value of its collections. They do a good job of collaborating with students, researchers, and the press.

CHIs may also try to establish a direct relationship with audiences and engage them in their actions. Ireland's National Folklore Collection UCD Digitization Project, Meitheal Dúchas.ie, uses Facebook for this purpose. The Digital Archives of Latvian Folklore (garamantas.lv), on the other hand, turned to mass media to amplify their crowdsourcing campaign message, which was promoted on National Radio and the Public Broadcaster.

Cross the borders of your language!

Cultural heritage, as well as research, should have no borders. While we should respect scholarship produced in national languages, providing as much information as possible in **international language** would be beneficial for the **international audience** and provide wider recognition of scholarly achievements. CHIs should translate as much of their work as they possibly can into international languages – perhaps using volunteer translators if resources are lacking, or, alternatively, websites can be enabled so they are translated by automatic tools (e.g. Google Translator).

For instance, The Louvre offers access to its site in seven languages; while Garamantas.lv offers access to its metadata and basic information also in seven languages, and uses volunteer translators to translate new terms and descriptions. International cooperation can also be established with countries who are interested in having a CHI's holdings digitised and made available in their languages, as is the case with the cooperation between the British National Archives and the United Arab Emirates. Although the repository is not yet live, texts will be available in both English and Arabic.

5

A showcase of successful cooperation examples

01

Digital Archives of Latvian Folklore

The Digital Archives of Latvian Folklore (garamantas.lv) has been established as a participatory digital resource and shared research space. It makes up the collections of the Archives of Latvian Folklore (established in 1924, and part of the Institute of Literature, Folklore and Art of the University of Latvia) – namely, manuscripts, images, audio, and video recordings – which are available online and readily (re)usable in research, cultural industries, and for general inquiry. Garamantas.lv curates the crowdsourcing sub-resources, lv100.garamantas.lv, talka.garamantas.lv, dziedi.garamantas.lv, jauta.garamantas.lv, and incorporates thematically corresponding collections from other CHIs. Garamantas.lv has been developed and is maintained by the LFMI Digital group at the Institute of Literature, Folklore and Art (University of Latvia).

Benefits

Researchers have a shared digital work-space in which they study and work with digitised collections. Their work helps improve the quality of the descriptions and metadata, and reveals cross-references between people, items, places, and events. The results of their work are publicly visible. Studies also attest to the fact that the digitisation and creation/management of digital archives is necessary.

Outreach initiatives aim to increase societal involvement by using public and social media, as well as by carrying out regular regional workshops. Updates are posted once new research material is contributed, existing data is enriched, or a manuscript or audio recording is transcribed.

Resources needed

The project team includes such permanent roles as the Head of Digital Archives, editorial and outreach staff, and developers. No extra funding is requested from researchers for carrying out their projects on garamantas.lv; using tools already developed for data import; categorising, processing, or digitising the collections they require; or promoting their transcription. However, if a researcher or research group needs additional tools for data processing, or another advanced feature, additional funding will be needed for development, digitising, and editorial staff. The Garamantas.lv project has been supported by the Ministry of Education and Science of the Republic of Latvia since 2015. Separate parts of the digital platform are supported by several projects funded by the European Research Development Fund and the Culture Capital Foundation of Latvia.

How was cooperation established?

Research on the (non-digitised) archival collections has been carried out since the Archives of Latvian Folklore was establishment in 1924. The digital platform, which was first launched in 2014, has completely refashioned cooperation, as it has promoted the use of archival collections in research, education, and general inquiry. As researchers have direct access to archival collections and secondary materials attributed to the collections, the mediation of an archivist has become less important. Archivists then have more time for describing collections and working with metadata.

What was unique?

Garamantas.lv is the first CHI resource in Latvia to put collaboration at its very base. Public volunteers work side by side with research staff. Garamantas.lv offers 'special treatment' to researchers – they are able to influence the digitising agenda, they have special access which enables them to use restricted collections, and the use of tools to process data in different ways, create taxonomies, edit and translate data, import, compare data, and have it available for further use outside the digital platform.

Tangible proof of data reuse

1. From January 2015 to May 2018, 135,630 unique users generated 2,767,500 page-views at garamantas.lv and its sub-resources. The site has been accessed from almost every country in the world, and

36% of users use the English language.

2. Since 2015, at least 10 research books and many research articles have been published using garamantas.lv.
3. At least four research projects have been based on garamantas.lv collections or its digital tools.
4. New collections that were necessary for specific research projects have been promoted and created via the garamantas.lv platform and its communication channels. For example, the Autobiography Collection of Latvian life writings was created at the beginning of 2018.
5. Several different crowdsourcing tools and campaigns have been created to interact with and complement the archival collections: manuscript transcription facility talka.garamantas.lv (for schools) and lv100.garamantas.lv (general audience), the ethnographic surveying tool jauta.garamantas.lv, and the creative response campaign 'Sing along with the archives' dziedi.garamantas.lv.

02

Letters of 1916–1923

The first public humanities project in Ireland began in 2013. It created a crowd-sourced digital collection of letters written between 1916 and 1923 and includes letters held at institutions (in Ireland and abroad), alongside those in private collections.

Benefits

Researchers become involved in a digital humanities project, learn new skills, collaborate with a diverse range of CHIs as well as the public, and work with both digitised and transcribed letters. CHIs have their letters digitised, transcribed, and put online; but also have their collections used, (re)discovered, and highlighted by both the research community and the public.

Resources needed

- **Human resources and leadership**
  The project required a wide spectrum of roles such as: a principal director and editor-in-chief, a project manager, an associate editor, project coordinators and assistants, an outreach coordinator, postdoctoral researchers, research assistants, a number of technical roles (technical officers and developers, senior systems administrator, web application specialist, research IT manager), interns (a variety of roles, from research to technical), as well as a workflow, communication and social media coordinator. The roles and the size of the team changed and evolved over time, which was dictated by the needs of the project at the different stages (you may also like to consult the full list of staff). From the CHIs' side of the project, a number of staff were assigned across CHIs in order to liaise with the 'Letters of 1916' project; for example, the archivists and librarians who coordinated the digitisation process and acted as points of contact.
- **`Collections**
  In order to build such a vast collection of letters the project both received digital copies of letters, and digitised the letters from CHIs and private collections from Ireland, Europe, and the United States. A full list of the collections is available here.
- **Digital technologies**
  The core of the project was to be its online collection of letters, which needed to be digitised (scanning equipment, DSLR cameras), post-processed (Adobe Photoshop), uploaded online involving metadata creation (Omeka), and transcribed (transcription tools). The full list of digital tools is available here.
- **Transcribers**
  In order to transcribe the letters the project crowd-sourced hundreds of transcribers via online campaigns and events. The transcribers contributed to the archive by transcribing or uploading letters. The project regularly updated the status of the transcriptions, and shared the transcribers' profiles in order to acknowledge their involvement and highlight the tremendous work being done. More information about transcribers is available here.

- **Funding**
  The project's financial support varied over the years and included the Irish Research Council; Department of Arts, Heritage and the Gaeltacht; Digital Repository of Ireland; Digital Scholarly Editions Initial Training Network (DiXiT), Framework 7; Maynooth University; Researcher Night funded by the European Commission, Marie Skłodowska-Curie Actions and Trinity College Dublin; and the Faculty of Engineering, Mathematics, and Science.

How was cooperation established?

The project was established in 2013 following a number of conversations between the project's principal investigator (PI) and a few CHIs concerning relevant collections and their potential for such a project and collaboration. The collaboration with the public for contributing personal collections and/or transcribing was established via events, online campaigns, and social media. The number of collaborating CHIs grew organically and was established individually, usually through contacts that were made possible by the project.

What was unique?

It is the first public humanities project in Ireland, and a major crowd-sourcing initiative involving researchers and CHIs. The project always had a unique set of skills which were represented by (digital) humanities researchers and project coordinators. It created an online platform for digitised letters from CHIs and the public (personal collections), and made many collections accessible online for the first time thus allowing anyone with Internet access to contribute to the project by transcribing and/or uploading letters from their own collections.

Tangible proof of the project's reuse

One of the most remarkable examples of the project's reuse is 'Rising in Transition' – an educational initiative that started with a series of visits to schools to introduce the project and engage students in transcribing. It led to a new collaboration between teachers, historians, archivists, digital humanities academics, the Department of Education & Skills inspectors, and interns alongside the staff of the 1916 letters project team and Military Archives staff.

03

EMOTIVE

Emotive is an EU-funded heritage project that aims to use emotive forms of storytelling to dramatically change how we experience and connect to heritage sites. EMOTIVE works from the premise that cultural sites are, in fact, highly emotional places – that regardless of age, location, or state of preservation, they are seedbeds not just of knowledge, but of emotional resonance and human connection. Between 2016 and 2019, the EMOTIVE consortium will research, design, develop, and evaluate methods and tools which can support cultural and creative industries in creating narratives and experiences which draw on the power of 'emotive storytelling.' The outcome of this process will be a number of prototype tools and applications for use by heritage professionals and visitors which produce interactive, personalized, emotionally resonant, digital experiences for museums and cultural sites.

For visitors, Emotive will offer dramatic, emotionally engaging stories that can be experienced both while at a cultural site, or remotely. Wherever visitors are, they can follow the characters, look for clues, and explore environments, alone or with family and friends.

Benefits

The principal objective of the EMOTIVE project is to research, design, develop, and evaluate methods and tools that can support the cultural and creative industries in creating digital cultural heritage experiences, on-site and virtual, which draw on the power of 'emotive storytelling.' This means storytelling that engages visitors, triggers their emotions, connects them to other people around the world, and enhances their understanding, imagination and, ultimately, their experience of cultural sites and content.

For humanities researchers

One of the main objectives of the project is to research the concept of emotional engagement in the context of visitor experience. The project will record the requirements, best practices and guidelines with which to support humanities researchers in order to better understand how emotions work in terms of communicating heritage, and what conceptual tools are the most effective for promoting interaction and communication between visitors, and also between visitors and cultural heritage experts.

The project also aspires to design an evaluation framework for emotive experiences in a cultural heritage context to be used as a tool for researchers and experts who are evaluating their own concepts and experiences.

For Cultural Heritage Institutions

The project will support its EMOTIVE storytelling approach by providing a means for authors of cultural products to create high-quality, interactive, personalized, digital stories that will highlight the unique and individual characteristics of the specific sites and collections. More specifically, the project will,

- design a framework of best practices and guidelines for creating emotive cultural scenarios/stories for virtual and on-site museums using a visitor-centric approach;
- implement an integrated set of authoring tools for all stages of the production of an EMOTIVE story;
- implement an 'experience system,' which will be a powerful and generic infrastructure for storing, deploying, and presenting the EMOTIVE stories on mobile and desktop devices;
- implement a storytelling engine that is able to support the emotive storytelling approach;
- investigate the production of physical artefacts designed to extend the visitors' experience, thus encouraging further visits to the cultural site;
- develop simple methods of reconstructing physical space and producing digital 3D environments (through image-based modelling) and physical 3D objects;
- develop a methodology for the meaningful, well-rounded evaluation of tools and experiences for cultural heritage.

Resources needed

The EMOTIVE project (Emotive virtual cultural experiences through personalized storytelling) is an EC-funded Research and Innovation (RIA) action that addresses the topic CULT-COOP-08-2016: Virtual museums and social platform on European digital heritage, memory, identity, and cultural interaction.

The EMOTIVE consortium brings together the resources of eight participating organizations from five European countries (the UK, Greece, France, Italy, and Ireland), each of which excel in their respective fields and who have significant research experience. The consortium includes the following industrial partners: EXUS Software Ltd (EXUS), Diginext Sarl (DXT), NOHO Limited (NOHO); academia and research institutions: ATHENA Research and Innovation Center in Information, Communication & Knowledge Technologies (ATHENA), University of York (YORK), Institut National de Recherche en Informatique et Automatique (INRIA), Consiglio Nazionale delle Ricerche (CNR), University of Glasgow (UGLA); and user-related partners: YORK, UGLA, and NOHO.

How was cooperation established?

The consortium was brought together as a continuation of previous collaborations and interactions between several of the project partners. The CHESS FP7 project, which concluded in 2014, involved ATHENA and DXT in conceptualising, designing, and developing storytelling experiences for museums. The MAGELLAN project, which concluded in 2017, involved DXT and EXUS, and developed authoring tools for more complex, collaborative mobile experiences. V-MUST.net (FP7 2007/2013 http://v-must.net/) was a Network of Excellence focused on Virtual Museums, which aimed to provide the heritage sector with theoretical frameworks and tools to support the development of Virtual Museums. NOHO held a key role in V-MUST as one of the founding partners of the network, while CNR contributed with visualization tools, and Maria Roussou (ATHENA) was part of the seven-member expert advisory board.

Lastly, a research collaboration between ATHENA and York in 2014 and 2015 set the basis for the EMOTIVE conceptual framework.

What was unique?

EMOTIVE's conceptual approach builds on the power of storytelling – tapping into the underexplored incorporation of emotions in the area of heritage interpretation, and the widespread cultural interest in the art of narrative and drama.

EMOTIVE aims to answer a series of major unsolved epistemological questions that are related to European cultural heritage communication; as well as to advance a reflexive archaeological practice by crafting and studying the impact of evocative narratives on individuals' valuations of the past.

The use of engaging technologies such as mobile AR or VR with improved rendering quality, combined with the emotive storytelling approach and the virtual museum concept; promise a significant impact on visitors' interest in cultural heritage, especially younger generations.

The underlying concept of EMOTIVE blurs the frontier between traditional forms of virtual museums, experienced at home behind a tablet or a computer; and on-site mixed reality exhibitions. EMOTIVE, therefore, not only contributes to increasing synergies between virtual and traditional museums but provides tools to easily build a continuous exhibition space which is a mixture of both virtual and real worlds.

This approach is supported and promoted within EMOTIVE by our 'outgoing' consortium, who are open to collaboration with many institutions. Our members have exceptional experience in both traditional and technology-friendly museums and archaeological sites. This is also demonstrated by our user group, which actively involves more than a dozen external institutions, who are engaged via EMOTIVE's participatory methods.

Tangible proof of the project's reuse

The project has so far produced several experiences that have been evaluated by visitors in both of the projects' main sites, Çatalhöyük and the Hunterian. It has also produced experiences for other institutions that serve as 'living labs' for the project, and test and apply its concepts and technology.

04

ODIS Online Database for Intermediary Structures

ODIS is a bilingual (Dutch–English) relational joint database on the history of civil society (1750–present), which is used by a growing number of heritage and research institutions in Flanders/Belgium, but also in other European countries (e.g. Germany, Italy, the Netherlands, and Poland). ODIS illustrates how cooperation and the sharing of expertise between heritage and research organisations within a collective, but at the same time flexible data pool, is beneficial for both sides.

Benefits

ODIS stimulates cross-fertilisation between scholarly researchers and the custodians of cultural heritage collections. This improves the quality of historical research on civil society and allows the related documentary heritage (archives, libraries) to be widely known. Heritage institutions use the database to (1) provide basic information on their analogue and digital collections and (2) to elaborate contextual data sets about organisations, persons, families, buildings, and events related to that heritage. ODIS records are based on international standards and offer links to and from primary catalogues and digital repositories. By means of the database's search functions and tools, scholars can analyse its content; for example, in the context of prosopographical research or network analysis. But they can also use ODIS to store, pool, validate, publish, and/or analyse their own data sets, thus preserving them from oblivion and guaranteeing the reproducibility of their research.

Resources needed

- **Financial resources**
  ODIS was established thanks to two grants for the construction of research infrastructure (Research Foundation Flanders, Hercules Foundation); however, there is no structural government funding. By paying a (modest) yearly contribution

to the non-profit association that manages the database (see further), the partners ensure ODIS's ongoing maintenance.

- **Human resources**
  The contributions from the partners make it possible for ODIS to have a part-time data manager and a part-time database and applications manager. Staff members from several partner institutions form the technical working group.
- **Content**
  Data input is done by the partner institutions, which act as 'content providers.' Larger automatic data conversions are handled by the central management.
- **Expertise**
  Expertise related to both content and technical issues is shared by all partners. KADOC-KU Leuven, Documentation and Research Centre on Religion, Culture and Society of the University of Leuven (KU Leuven), acts as the host institution for the database (i.e. seat of the non-profit association, use of KU Leuven's ICT services).

How was cooperation established?

ODIS was set up in 2000 by research and heritage organisations thanks to a grant from the Research Foundation Flanders (FWO). During 2009–2014 a new database was constructed thanks to a grant from the Hercules Foundation (former Flemish Agency for Research Infrastructure, now part of the FWO).

In order to establish structural relations between the participating institutions, and to ensure their involvement in the management of the database, a non-profit association was set up under Belgian law in 2006. The following organisations are represented in its governing bodies: the founding partners (four main cultural archives in Flanders: ADVN, Amsab-Institute of Social History, KADOC-KU Leuven, and Liberal Archives/Liberas), the main Flemish universities (University of Antwerp, Free University of Brussels, University of Ghent, and KU Leuven), and the network of partner institutions that have joined ODIS. Each partner has concluded a contract with the association. More information about the partnership and a complete overview of partners can be found here.

What was unique?

- The collaboration between very diverse heritage and research organisations (even on a European scale), which are all working together within one joint database. ODIS wants to be both collective (jointly designed, used and managed; joint data sets; central help desk support) and flexible (large amount of partner autonomy, e.g. concerning the focus of the data input, the validation or quality control of data sets, and the publication of records).
- The management structure (non-profit association), which guarantees the involvement and commitment of the partners.
- The multifunctional use of the database, both by heritage professionals and researchers, as (1) an encyclopaedia, (2) a heuristic tool, (3) an authority database, and (4) a digital humanities research tool.
- The focus on contextual information: describing and interrelating organisations, persons, buildings, and events, that are linked to archives and collections. The structure of ODIS's records is based on international standards (e.g. ISAAR(CPF), ISAD(G), ISBD, ISDIAH).

Tangible proof of the project's reuse

- In 2017, 628,308 ODIS OPAC records were visited by nearly 75,000 unique users. OPAC content is released under a CC BY-NC-SA licence.
- In 2017, some 25 research and heritage projects systematically made use of the database, including the following international projects: Civitas-FARCD (Civitas – Forum of Archives and Research of Christian Democracy), and EECE (Encounters of European Elites in the 19th Century).
- The partner institutions themselves, but also many external organisations include a growing number of links to ODIS in their catalogues and databases (e.g. Royal Library of Belgium, Wikipedia, and the regional heritage databases in Flanders).
- The number of questions that the ODIS help desk receives is growing (171 in 2016, 234 in 2017).
- In 2019, the development of an ODIS-API will facilitate the reuse of ODIS data in other catalogues and databases of the partners.

05

Inspiring Ireland

Inspiring Ireland is a collaborative digital cultural heritage platform for exhibiting objects from a wide variety of Ireland's cultural institutions through a common portal. Objects are first added to Digital Repository Ireland's (DRI) certified trusted digital repository, which places them in a complex workflow for long-term preservation. From there, DRI's API (application programming interface) is used to pull the objects into a bespoke front-end exhibition site which is built on the Drupal platform. This combination – the unique and appealing front-end website with back-end preservation – is a distinctive aspect of the project.

In addition to creating exhibitions based on themes, the platform also includes expert essays which contextualise the exhibitions and encourage the serendipitous discovery of objects from different institutions, genres, and time periods. Originally launched in 2014, Inspiring Ireland was developed by DRI in close collaboration with the Abbey Theatre, the Chester Beatty Library, the Crawford Art Gallery, the Irish Museum of Modern Art, the National Archives of Ireland, the National Gallery of Ireland, the National Library of Ireland, the National Museum of Ireland, and RTE Archives. In 2016, a new series of exhibitions was launched to celebrate the centenary of the Easter Rising, which drew on content from the library and museum, as well as from the public through Collection Days. These collection days added a public history element to the project – people brought in objects from their private/family collections that were related to the events of 1916, they were interviewed, and the objects were photographed for inclusion in the exhibitions. The collection days also offered an excellent opportunity for further collaboration with cultural heritage institutions. For example, the National Library hosted an event, and provided digitisation services and expertise in kind, while a conservator from the National Archives was on site to provide advice on caring for the material objects.

Benefits

The project highlights the richness of Ireland's cultural collections and raises awareness about the need for the long-term digital preservation of these collections; this benefits the core mandates of both the research side (DRI) and the cultural heritage institutions. It demonstrates the possibilities of audience engagement in digitising cultural heritage materials, and provides an excellent example of 'agile collaboration,' in which collaboration took on a flexible and adaptable approach. At the beginning, a 'curation committee' was created with representatives from each of the institutions, and this committee collectively determined the exhibitions' themes and the objects which would be included. The result of this first phase was three exhibitions on broadly inclusive themes which resonated with 'Ireland' and 'Irishness,' both at home and abroad: a sense of identity, a sense of freedom, and a sense of place. While the project's innovation was to provide preservation and access to materials from different institutions through the same portal, one of the key successes was the creation of the collaborative community of people from these different institutions. The relations which have been built through the project continue well past the publication of the exhibitions.

Resources

Through its various phases, Inspiring Ireland was supported by Ireland's Department of Arts, Heritage and the Gaeltacht (DAHG); the Department of Foreign Affairs and Trade; and the Department of the Taoiseach via the Office for Diaspora Affairs, which funded the creation of the new portal; and all the institutions involved in putting existing staff resources into the project. While the funding was essential for the development of the project, all the institutions had to draw from existing staffing resources (which was universally limited) in order to select and prepare the content for the exhibitions. This limited the potential scope of the project to that of a pilot with occasional exhibitions; whereas more robust funding could see it develop into a living and continually evolving site. The DRI continues to host and maintain the site from internal resources, and is seeking opportunities to develop it further.

How was cooperation established

The DRI approached the various institutions with the backing of the Department of Arts Heritage and the Gaeltacht, and very quickly a 'curation committee' was created which included curators from each of the institutions involved. This group collectively developed exhibition themes.

What was unique?

The close collaboration between curators from multiple institutions to create a single collection of exhibitions from a diverse range of content was a key aspect of this project; as was the inclusion of the preservation element behind the public-facing website.

Tangible proof of reuse

The initial collaboration spawned two additional, unique series of exhibitions on the site: 'Inspiring Ireland 1916,' and 'Frongoch and 1916.' Materials from the site have also been incorporated into classroom teaching and provided the basis for research discoveries.

06

Jewish Memory and Family Heirlooms

The 'Jewish Memory and Family Heirlooms' project included research, educational, and exhibition-type components; and was aimed at activating family resources in examining identity construction. All the participants of the project talked about their Jewish identity as something real – verified by material evidence (objects, family heirlooms) and at the same time constructed on the idea of their ancestry. The research question was focused on the practice of granting objects which had been preserved in families, the status of being a Jewish heirloom. The project was directed towards transforming family memory into the memory of the public domain through being presented in the prestigious public space of a museum. The museum exhibition, as a public space, 'gave voice' to these objects, which, as family heirlooms, usually 'talk' only in private spaces. The exhibition was regarded as a special case which permitted the keepers of the objects to share their experience of national and cultural identity revival with visitors. The 'Jewish Family Heirlooms' exhibition, which was held in the State Museum of the History of Religion (SMHR, Saint-Petersburg) in 2011, was based on this research. The objects were presented along with 'their stories' (audio and video interviews with the owners). The exhibition can be considered to be an action aimed towards the rehabilitation of the culture of family memory, which was damaged during the Soviet period as a result of state policies which reformed the institution of the family. The exhibition was intended to draw the public's attention to the problems of preserving family memory.

Benefits

The project stimulated cooperation between the researchers and the CHIs. The museum's staff were involved in the project, and the museum's collection was enlarged because of the objects which owners had donated after the exhibition. The items from museum's collection were displayed together in one space with these private objects.

Resources needed

- **Financial resources**
  The project was funded by the following institutions: Charities Aid Foundation (CAF), Great Britain; Genesis Philanthropy Group (GPG); the American Jewish Joint Distribution Committee; and the Russian Jewish Congress.
- **Human resources**
  Researchers included those affiliated with the Interdepartmental Center 'Petersburg Judaica,' and the European University at Saint-Petersburg, Russia; the staff of the CHI (SMHR), who were involved in preparing the exhibition; the private owners; the technical working group (preparation of the film for the exhibition and the website); and volunteers (students in related fields, who wanted to practice interview methods). The CHI

was responsible for the museum space and staff, objects from the museum collection, PR, and advertising.

How was cooperation established?

This was the second project organized by the SMHR and the researchers from the Interdepartmental Center 'Petersburg Judaica.' The project's initiative belonged to the Center, who organised the financial resources for the first part of the project (the interviews). The museum then expressed its interest in the project and provided resources to make an exhibition.

What was unique?

The project was based on an original research concept (see the article 'Jewish Memory and Family Heirlooms' by A. Sokolova). The research which resulted in the exhibition was devoted to heirlooms as special repositories of family memory, and to the owners' practices of storing and presenting these artefacts. The principal question for this study focused on the relations between human beings and objects, and how the guardians of these objects, which embody family memory, and the objects themselves act together as guarantors of the existence of the past in the present. The exhibition demonstrated that almost any kind of family heirloom could be represented as a Jewish heirloom, if its owner wished to comprehend and represent the family past as Jewish. At the same time ritual items kept in families were considered to be the most convenient items for recognition as family heirlooms. The owners regarded all the objects as being a precious part of Jewish cultural heritage, and were proud that their family heirlooms were exhibited in the state museum. A traditional museum display of objects was combined with audio-installations. Using the audio-guide in front of each showcase which contained the objects, one could hear the voice of the owner. Fragments of video records from interviews were assembled into a film which was shown at the exhibition.

Tangible proof of the project's reuse

- The exhibition was attended by an estimated 8,000 people. The project's website has been visited by 4,500 users since 2013.
- New articles have been written based on the project (for example, see the article 'Jewish Memory and Family Heirlooms (based on materials from field studies in St Petersburg, 2010–11)' by A. Sokolova.
- Several of the objects displayed in the exhibition were donated to the museum and later reused for other museum projects.

07

LIMC (Lexicon Iconographicum Mythologiae Classicae Archaeological Database)

The digital database of the Lexicon Iconographicum Mythologiae Classicae (LIMC) is a multivolume encyclopaedia which catalogues classical antiquity representations of mythology in the plastic arts.

Benefits

Digital LIMC is the online archive of the former Foundation for the Lexicon Iconographicum Mythologiae Classicae and contains more than 56,000 entries and approximately 40,000 images of archaeological objects (e.g. vases, reliefs, stelae, mosaics, mirrors etc.) which have been collected for a thorough study of the myths and legends of the classical world and their iconographical representations.

Resources needed

Staffing resources came from the LIMC, University of Basel, Department of Classical Studies, Digital Humanities Lab, and DaSCH. Funding came from the LIMC foundation and the Swiss National Research Foundation.

How was cooperation established?

The LIMC had an exhaustive collection of data and images concerning classical mythologies. The foundation contacted researchers at the university asking if they could take care of the database, which was no longer being maintained, and make it available to the public. During this process, the foundation transferred its rights to the database to the University of Basel, along with an obligation to update the database and make it available for research.

The results were communicated to a broad international audience by the publication of 30 printed volumes (Lexicon Iconographicum Mythologiae Classicae and Thesaurus Cultus et Rituum Antiquorum), as well as by creating a parallel database that was accessible by the public. These works represent the current knowledge in this field of research. Recently the existing databases were migrated to new platforms: the Knora (Knowledge Organization, Representation and Annotation), and SALSAH (System for Annotation and Linkage of Sources in Arts and Humanities), both of which are being developed and hosted by the Digital Humanities Laboratory (DHLab) of the University of Basel. DaSCH will provide long-term access to these research data.

What was unique?

Published serially from 1981 to 2009, it is the most extensive resource of its kind, providing full and detailed information.

Tangible proof of the project's reuse

In recent years, the cross-linking of LIMC data with other projects has advanced considerably: links have been successfully created to the Beazley Archive Pottery Database, the Attic Vase Inscriptions Projects, and to the online collections of several large museums. By this means about 20,000 objects in the database have been linked to one or more other long-term accessible digital resources. Information that is not yet included is continuously added to the objects in the database.

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Head of the ACDH-OeAW's task force on legal issues, co-chair of the DARIAH working group on ethical and legal issues (ELDAH), and of the Open Access Network Austria's working group on legal aspects of Open Science. Her PhD thesis focuses on foreign languages in Peter Handke's stage texts, and her academic interests include (modern) manuscripts research, legal frameworks of digital research, data modelling, archival theory, and contemporary Austrian literature.

NATALIE HARROWER
Digital Repository of Ireland at Royal Irish Academy, Ireland

Director of the Digital Repository of Ireland. She is involved in many national and international activities that support and promote digital preservation, particularly as an aspect of digital cultural heritage, data sharing and reuse, and Open Science practices. She is appointed to the European Commission's high-level expert group on FAIR data implementation, a member of Ireland's National Archives Advisory Committee (NAAC), and a member of the OECD high-level expert group on Business Models for Data Repositories.

FREJA HOWAT-MAXTED
University of Sussex, Brighton Museum, V&A Museum, United Kingdom

Research Assistant in Digital Archiving working on an open access collection that makes available to the public thousands of images, documents, video/audio recordings and digital 3D models that explore modern Bethlehem (West Bank) and its modern history of global connectivity.

MARIA ILVANIDOU
Digital Curation Unit – IMSI, ATHENA R.C., Greece

Scientific associate at DCU, acting as the community manager of the APOLLONIS: Greek Infrastructure for Digital Arts, Humanities and Language Research and Innovation project. Her research interests include digital archaeology, GIS and spatial analysis for the humanities, documentation standards, data architecture, cultural heritage management and communication.

WOJCIECH KORDYZON
National Library of Poland

He runs a research project at University of Warsaw dedicated to Reformation dialogues and Polish translations of works written by Italian ex-friar Bernardino Ochino. He also works at the Polona digital library, where he is involved both in the maintenance of the current system and its development.

MAGDALENA KRÓL
Institute of Polish Language of the Polish Academy of Science

Researcher working with corpora: ELTeC and the diachronic corpus of Polish (project in progress). She is engaged with organising Digital Humanities Lunch – a series of meetings on the connection between humanities and the digital.

ANTONIO GABRIEL LOSADA GÓMEZ
Universidad de Salamanca, Spain

He has a background in Computer Sciences and Is involved in two digital humanities projects, in which he took care of the data visualisation and digital data handling. He has a meaningful experience of how to handle a heritage collections datasets through interactive visualisation means, especially with a focus on how to deal with the uncertainty that is present and inherent to the field of humanities.

MACIEJ MARYL
Digital Humanities Centre at Institute of Literary Research of the Polish Academy of Sciences, Poland

Ph.D., assistant professor and the founding head of the Digital Humanities Centre at the Institute of Literary Research of the Polish Academy of Sciences. He currently runs a COST action New Exploratory Phase in Research on East European Cultures of Dissent. He is a member of DARIAH-PL scientific board and is involved in the DARIAH Digital Methods and Practices Observatory WG (DiMPO) and OPERAS.

SANITA REINSONE
Institute of Literature, Folklore and Art, University of Latvia

Leader of the Digital Humanities Group of the ILFA since 2016 and serves as a board member of the association "DH in the Nordic Countries" and Working Group on Archives SIEF (International Society for Ethnology and Folklore), she also co-led the DH society in Latvia. She was the founder and head of the Digital Archives of Latvian Folklore and now leads several research projects, curating outreach projects that deal with crowdsourcing in the field of intangible cultural heritage.

NATALIA SUSLOVA
State Museum of the History of Religion, Russia

Curator and research fellow of the Department "Christianity in the West" and the collection manager of the "Western religions. The Graphics Collection" in the State Museum of the History of Religion. She is responsible for the Western European Graphic Department. In that role, she also provides the Museum's input into national database GOSKATALOG.

MARK SWEETNAM
Trinity College Dublin, Ireland

Director of the M. Phil. in Digital Humanities and Culture. He teaches courses on , Digital History' and , Digital Scholarly Editing,' as well as coordinates an internship programme, which involves students working with a wide range of cultural heritage institutions, SMEs, research projects, and charities. As a researcher, he is interested primarily in the area of seventeenth-century literature.

KAMIL ŚLIWOWSKI
Otwarte Zasoby, Poland

Media literacy trainer, interested in applying new technologies in education, especially in the context of copyright and privacy protection. On a daily basis, he cooperates with the School with Class Foundation, Panoptykon Foundation and Geek Girls Carrots. He blogs about new technologies and open educational resources at www.otwartezasoby.pl

MARCIN WERLA
Poznań Supercomputing and Networking Center, Poland

Head of the Digital Libraries and Knowledge Platforms Department at the Poznań Supercomputing and Networking Center (PSNC). He was involved in creating a network of over a hundred of digital libraries in Poland and connecting it with Europeana. He served as an Europeana Board Member and DARIAH VCC3 co-Head.


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