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ERA-NET Plus on Cultural Heritage and Global Change Research

Instrument: ERANETplus

Work package 4: Project monitoring and impact assessment
Task 4.2: Monitoring of trans-national projects progress

Deliverable 4.4
Title: Final Report on the Joint Call impact assessment

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Start date of project: 1st October 2013 Duration: 5 years
Ministry of Cultural Heritage and Activities (Italy)
Project coordinator: Antonia Pasqua RECCHIA

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PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	**X**

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Introduction

This deliverable 4.4 (Final Report on the Joint Call impact assessment) is the last document produced by the Heritage Plus Work Package 4 (WP4, Task 4.2) dedicated to Heritage Plus Call for proposals monitoring and assessment. The Heritage Plus call for transnational research proposals has been launched in March 2014, in the frame of the Joint Programming Initiative "Cultural Heritage and Global Change: a new challenge for Europe" (JPI-CH), gathering 15 countries and financing 16 transnational research projects.

According to the Heritage Plus initial work plan, WP4 objectives are to monitor and assess outputs and impact of funded trans-national projects, compared to their initial objectives, resources and timetable established, but also to monitor and assess the impact and benefits of the Heritage Plus programme as a whole, based on criteria such as achieving a better integration of the cultural heritage research community, increasing coordination between cultural heritage research funding players, and implementing the JPI-CH Strategic Research Agenda (SRA) four research priorities: (1) Developing a reflective society (2) Connecting people with heritage (3) Creating knowledge (4) Safeguarding our cultural heritage resource.

In the Heritage Plus Work Plan, WP4 is divided into the two following sub-tasks:

- **Task 4.1:** Monitoring of trans-national projects progress and follow-up (months 1 to 54)
  This task adapted the former JPICH monitoring and evaluation methodology (JHEP Deliverable 5.2[1]), in order to allow the annual monitoring and evaluation of the funded projects: indicators covering inputs, outputs, outcomes and impact were selected and adapted for call monitoring and evaluation purposes, adapting and creating specific monitoring templates. The information on progress provided by the Heritage Plus funded projects was gathered in individual reports and summarised in three annual progress reports (D4.1,D4.2 and D4.3[2]).

- **Task 4.2:** Impact assessment of the Joint Call (months 49 to 60)
  Based on the adapted JHEP indicators and and the data monitored by Task 4.2, information about the impact of the Heritage Plus Joint Call has been collected and complemented by a questionnaire (MS10: Set up of a questionnaire for impact

1 JHEP2_D5.2_Report on the implementation of monitoring and evaluation: Recommendation for future monitoring and evaluation activities_30th March 2015

2 Heritage Plus_D4.1, 1st Annual progress Report of funded projects and explanation on the use of the EC funding, 11th April 2016; D4.2, 2nd Annual progress Report of funded projects and explanation on the use of the EC funding, 28 April 2017; D4.2, 3rd Annual progress Report of funded projects and explanation on the use of the EC funding, 1st August 2018.

assessment analysis to be approved by the Management Group) launched in 2018, in order to perform an ex-post evaluation of the Heritage Plus programme, focusing more particularly on the outcomes and broader impact on the social sphere and addressing the question of the effectiveness of the action relating to the initial objectives.

The present Deliverable 4.4 “Final Report on the Joint Call impact assessment” (month 60) aims to evaluate the 16 funded transnational projects' contribution and impact on the initial Heritage Plus topics, as well as their contribution to the JPICH SRA research priorities. Therefore, the objectives of this report are firstly to focus on the Heritage Plus programme outputs by examining and evaluating all data collected by Task 4.2, and reported by projects in their individual reports. Then, it will use these data, combined with other instruments to assess specific outcomes and impact of the Heritage Plus research projects, as well as the impact of the Heritage Plus call as a whole. Finally, this report will formulate several recommendations to improve the system and to foster the collaboration opened to the Heritage Plus Partners in future calls.

In order to achieve these objectives, the present Deliverable is organised in 4 main sections: Section 1 presents in details the whole methodology used to draft the D4.4 report, as well as the different instruments necessary to perform this impact assessment. Section 2 focuses on the individual projects results, presenting for each Heritage Plus projects selected narratives about its research objectives, its main achievements, and its potential impact. Projects are organised according to the initial Heritage Plus challenges they intended to tackle in their initial proposals. The third section of this document focuses on impact – key figures and narratives – of the Heritage Plus research projects and of the Heritage Plus call itself. To conclude, the final section, section 4, presents different recommendations driven from previous sections, as well as from other instruments used for the impact assessment presented in Section 1.

1. Methodology

Several instruments were necessary to conduct a successful evaluation of the Heritage Plus call for proposal impact, within the framework of Task 4.2 of the Work package 4 of the Heritage Plus work plan. These instruments are listed and described below. Task 4.2 evaluation and assessment phase started officially in September 2017, but the monitoring and reporting of research projects activities was performed from the beginning of the call by Task 4.1. Figure 1 below illustrates how the different Sections of this D4.4 report made use of the available instruments and indicators to conduct the impact evaluation of the research projects.

Considering the really recent termination of the majority of Heritage Plus research projects, in May 2018, and the time needed to proceed with the projects' final reports, outputs and outcomes, this D4.4 report is a really first attempt to identify pathways leading to the potential delivery of impact by the projects themselves, and by the Heritage Plus call as a whole. These pathways are only suggestions, and may be supplemented later by further and deeper investigations into the long term and indirect impact of activities financed within the framework of the Heritage Plus call for proposals.

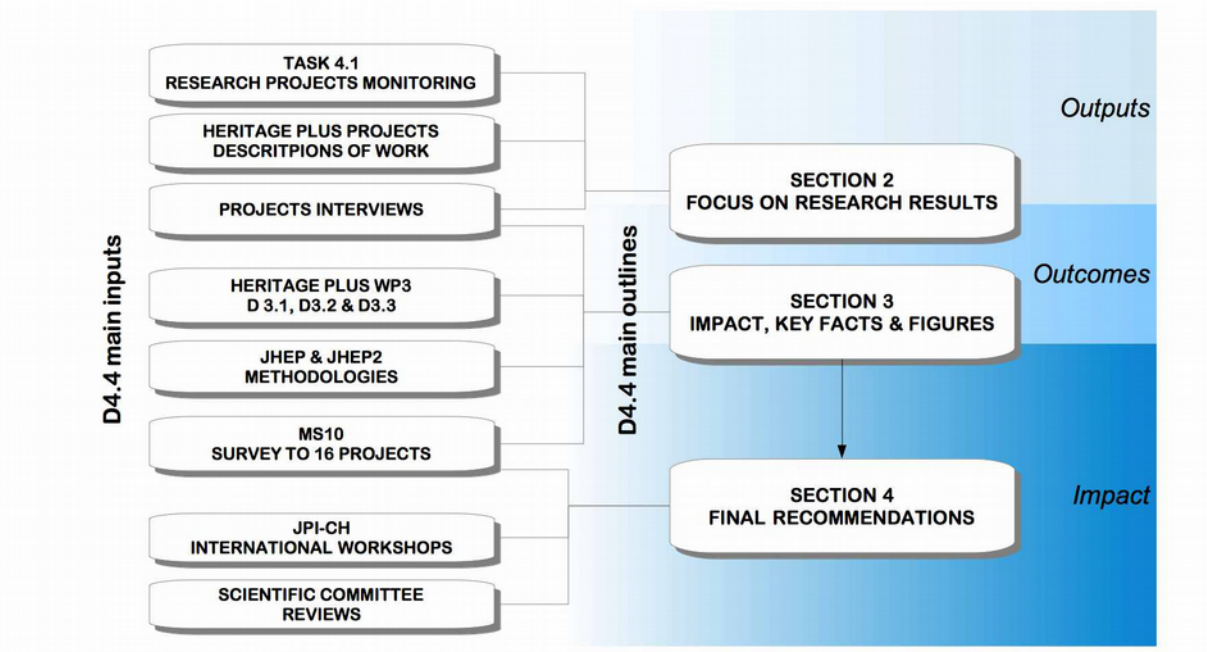


Figure 1: D4.4 main outlines and instruments applied to the Heritage Plus monitoring and impact assessment

1.1. Task 4.1: Research projects monitoring

Task 4.1 has been undertaken by the RCE[3] from the start of research activities within Heritage Plus. Reporting formats were developed based on good practices and in

3 RCE; Cultural Heritage Agency of the Netherlands

collaboration with the JPI-CH monitoring and evaluation team, including the relevant parameters necessary to answer JHEP and JHEP2 indicators (see Section 1.4 below). Task 4.1 published 3 reports, deliverables 4.1, 4.2 and 4.3, each one summarising individual annual reports of the 16 heritage Plus research projects, and giving technical review and a precious overview on the outputs, deliverables and dissemination produced by the different projects. The second and third report (D4.2 and D4.3) were also enriched with a more critical assessment of scientific progresses and societal impact of the projects, including a summary of both JPI-CH Scientific Committee reviews (see below). Regarding individual annual projects reports, these were composed by:

- A Scientific progress and impact report (within the reporting period)
- A publishable summary for the period
- The objectives for the period
- The progresses, achievements and future activities
- The meetings and internal collaborations for the period
- Data tables about impact: dissemination, networking, knowledge transfer for the period
- A financial summary

A final report, over-arching and summarising the periodic reports, was submitted together with the last periodic report by Heritage Plus research projects, bringing the total number of reports to 4 per projects, and 64 reports in total. Since the majority of projects could not start before June 2015, due to the administrative processing of the call, and several projects having a three year duration, the deadline for the third and final report was set on the 1st June 2018, In line with this, the Heritage Plus Management board agreed with a prolongation of deliverable 4.3, summarising all projects final reports and the last Scientific Committee review, to the 1st August 2018.

Consequently, task 4.2 had a really short time to deal with an important amount of information in view of the elaboration and drafting of the D4.4 final report, for the end of September 2018. To elaborate Deliverable 4.4, it was not only necessary to go through the three reports produced by task 4.1, but also necessary to go through all 64 individual projects reports produced from the beginning of the monitoring and reporting activities, in order to check concrete outputs, data tables and compare these data with the 16 initial projects' Descriptions of Work (DoW).

1.2. Projects descriptions of Work (DoW)

Projects' initial Descriptions of Work were also reviewed by Task 4.2 to establish this report, in order to compare the initially expected amount of scientific outputs and outcomes, with the data reported in the different projects periodic reports, and the amount of outputs finally produced by research projects. As a reminder, these 16 Descriptions of Work were really detailed and composed by the following parts:

- A list of principal investigators,

- A project summary,
- A description of the research,
- The research context and progress beyond the state-of-the art,
- The research design and methodology, including interdisciplinary approach,
- A work plan, with detailed timelines and milestones,
- A short bibliography supporting the research case,
- A description of the Heritage Plus project management structure and procedures,
- A description of the quality, and relevant expertise and experience of the individual participants (including experience of coordinating research across national boundaries),
- A description of the consortium as a whole (including complementarity, balance between disciplines, level of staffing, plans for effective collaboration), including other stakeholders,
- An allocation and justification of the resources to be committed along with a justification of the distribution of costs across the PIs and of the overall requested budget,
- A description of the Relevance to the Call for Proposals including fit to the aims and topics of Heritage Plus,
- A description of the contribution of ideas and knowledge that can be transferred to public and private stakeholders, and exploited in high-value tools applied over the short to mid-term,
- A description of the expected relevance of the Heritage Plus project outcomes and its potential value for researchers, non-academic stakeholders and society, including SMEs, heritage owners, public administrations, research partners and local communities,
- A description of the involvement and contributions of Associated Partners,
- A description of planned activities and measures to maximise knowledge exchange and transfer, and the dissemination and/or exploitation of trans-national Heritage Plus project results, and management of copyright, intellectual property, ethical issues* and research integrity,
- The partners' Cvs,
- The Associated partners letters of commitment.

1.3. Heritage Plus WP3 reports: Deliverables 3.1, 3.2 and 3.3

In addition, Task 4.2 refers to data given by Heritage Plus Deliverables 3.1, 3.2 and 3.3 for all data concerning the application procedures of the call Heritage Plus. These three reports – D3.1, *Report on the results of the first Step of the Call* and D3.2, *Report on the results of the second Step of the Call and scored ranking list of Full Proposals* and D3.3, *Joint selection list of trans-national projects, formal financial commitments from beneficiaries and request for topping-up* – were all produced by the Italian project coordinator and delivered in October 2015. The communicated data were useful to draft

the third Section of this D4.4 report. More precisely, the D3.1 included the following information:

- Description of the first eligibility check
- Description of the Pre-proposal evaluation procedures
- The list of submitted Pre-proposals
- The list of eligible Pre-proposals
- The list of 24 evaluation experts in Stage 1
- The form for evaluators
- The list of Pre-proposals going to Step 2
- A timeline of the pre-proposal stage

Regarding deliverable 3.2, it included:

- A description of the first part of the Full-proposals evaluation
- A description of the second part of the Full-proposals evaluation
- General data on the complete call for proposals
- The list of Pre-proposals admitted to Stage 2
- The list of Full-proposals considered for remote evaluation
- The list of experts for remote evaluation
- The evaluation form used for remote evaluation
- The description of matches Experts-Projects for evaluation
- The composition of the International Peer Review Panel (IPRP)
- The set of documents for evaluation given to the IPRP
- The report of the External Observer
- The list of proposals passing all evaluation thresholds
- The committed national funding allocations for the Heritage Plus Call
- The list of full-proposals evaluated as eligible for funding by the Heritage Plus Management Group
- A timeline of the full-proposal stage

Finally, D3.3 was organised as follow:

- A presentation of the JPI-CH funding list and of the 16 research projects
- An overview of the budget awarded, of the national funding committed, and of the EC top-up funding.

All additional documents required by the task 4.2 evaluation team were gently provided by the Italian coordinator of the call, including applicants' tables, complete projects pre-proposals, complete projects full proposals.

1.4. JHEP and JHEP2 monitoring and evaluation methodologies

Task 4.1 and 4.2 paid attention to respect as much as possible the JHEP2

methodology, which is an update and upgrade of the JHEP methodology for the monitoring and evaluation of JPI-CH activities designed within the framework of the first Coordination and Support Action (CSA) awarded by the European Commission to the JPI-CH. The latest update of this methodology has been presented in JHEP2 D3.1, delivered by the JPI-CH Portuguese partner (FCT) in June 2016[4]. D3.1 report includes a list of 34 indicators assessing different parameters, from the implementation of the necessary enabling instruments, to the transformational effect of the JPI-CH, and it includes a specific selection of 3 indicators dedicated to joint calls assessments. These include:

- **Indicator 17:** Number of patent applications, license agreements, invention disclosures, studies underway, technology demonstrators, new specific frameworks and methodologies dedicated to Cultural Heritage conservation
- **Indicator 18:** Number of publications resulting from research activities,
- **Indicator 19:** Share of research project addressing improvement in accessibility of materials and data.

In addition, Task 4.1 monitoring instruments, as it was already explained previously in this report, were designed in order to meet the needs of the previous JHEP methodology for the monitoring and evaluation of JPI-CH activities[5]. In conclusion, all data presented in the D4.4 report were produced in accordance to the needs of the JPI-CH monitoring and evaluation team, and future calls monitoring and reporting templates may evolve accordingly to these needs.

1.5. Projects reviews at the JPI-CH international workshops

Two workshops were organised by the JPI-CH coordinator in order to present and review all projects financed within the context of the Heritage Plus call for proposal, but also by the first JPI-CH Pilot call. The first event took place the 20th and 21st February 2017 in Brussels. The second one was organised in Torino, the 28th and 29th May 2018, quite nearly to the official Heritage Plus research projects' conclusion, the 1st June. Both events offered the opportunity to debate with Heritage Plus partners, JPI-CH members, JPI-CH Scientific Committee members, other stakeholders and representatives from the European Commission, about the results and impact of the transnational research projects, and the different ways to maximise this impact. In addition, both events were also a key opportunity to suggest some synergies between research projects with similar, common or at least very close objectives and methodologies, and to foster the formation of a network of research actors and interested stakeholders, with the JPI-CH as central node. Many elements resulting from these debate were useful for the drafting of the present report, and were mainly included in the third and fourth Sections of this Deliverable, especially in the

4 D3.1, Key Performance Indicators to monitor alignment at national research programmes level and at JPI CH research activities level, FCT Portugal, June 2016

5 JHEP_D5.1, Report on methodology, definition of indicators; MiC France, November 2013 & JHEP_D5.2, Report on the implementation of monitoring and evaluation: Recommendation for future monitoring and evaluation activities, MiC France, March 2015.

recommendations (Section 4 below).

1.6. Scientific Committee reviews

Almost simultaneously to both events described in Section 1.5, two Scientific Committee review workshops were organised by the Task 4.1 leader, in order to review the Heritage Plus individual projects' second and final periodic reports. These review workshop took place in Brussels, the 21st February 2017 for the first one, and in Rome, the 15th June 2018 for the second one. Before and during these workshops, Scientific Committee members were invited to evaluate the projects' progresses individually and formulated a number of recommendations, to which Heritage Plus projects had the possibility to answer in their final report. These reviews were also summarised in Task 4.1 deliverables 4.2 and 4.3, and were really useful to formulate several recommendations in the present D4.4 report, especially in Section 4 below.

1.7. MS10: Questionnaire to 16 participating projects

A key milestone to be produced by Task 4.2, according to the initial Heritage Plus Work Plan, was to “Set up a questionnaire for impact assessment analysis to be approved by the management group” in November 2017 (month 50). The draft questionnaire was presented and validated by the Heritage Plus financing partners during the Management Group meeting in Rome, the 28th November 2017, and the final version was addressed to the 16 Heritage Plus research projects in May 2018 with a deadline in September. This questionnaire made use of the online survey instrument “Limesurvey” and included a series of 27 questions, with additional sub-questions, ranging from question on the general Call process (clarity of call documents and procedures) to questions on Call sustainability (use of the results after the end of the call, continuation of the research projects) and added-value (compared to other transnational funding mechanisms or compared to no call at all). This questionnaire is presented in Annex I of the present report. Questions were drafted using best-practices presented in the ERALEARN2020 online platform[6] and available Deliverables, and were adapted to the Heritage Plus call for proposal monitoring requirements. In total, the Task 4.2 evaluation team received 11 full answers to this questionnaire, which are presented together with the questions in Annex I. These were really useful to draft Section 3 and 4 of the present D4.4 impact report.

1.8. Interviews

In order to complete the questionnaire described above and maximise the opportunity offered by the different review workshops in Brussels and Torino, where almost all Heritage Plus projects were represented, Task 4.2, in collaboration with Task 4.1, conducted some targeted interviews of Heritage Plus projects participants. 2

6 https://www.era-learn.eu/

interviews were conducted until now, one with a partner of the project PICH, Loes Veldpaus, and one with the Project Leader of REFIT, Tom Moore. As time was really short between the end of Heritage Plus research projects and the drafting of Deliverable 4.4, there was no time to conduct extensive interviews of all financed projects, but more interviews may be conducted and included to this report later on. Results of both interviews were mainly used to draft and enrich narratives in the second Section of this report, and their summaries are presented in Annex II & III of this report.

2. Focus on research results

The transnational Call for proposals selected a list of three topics, as priorities to be answered by the research projects and funded by the financial partners. These topics were driven from the JPI-CH Strategic research Agenda (SRA)[7] and are the following:

1. Safeguarding tangible cultural heritage and its associated intangible expressions
2. Sustainable strategies for protecting and managing cultural heritage
3. Use and re-use of all kinds of cultural heritage

Heritage Plus Research projects were asked to prioritise these topics in their initial Description of Work (DoW). They were distributed among the three different following sections according to this prioritisation (sections 2.1, 2.2 and 2.3 below). In their DoW, some projects prioritised only one single topics, some two, and the other decided to answer all research topics. This projects' distribution between the Heritage Plus thematic topics is summarised in figure 2 below. This figure shows which topics were prioritised as topic 1 by Heritage Plus projects, but also, in addition, which projects crossed prioritised several topics, and the crossing points between these topics.

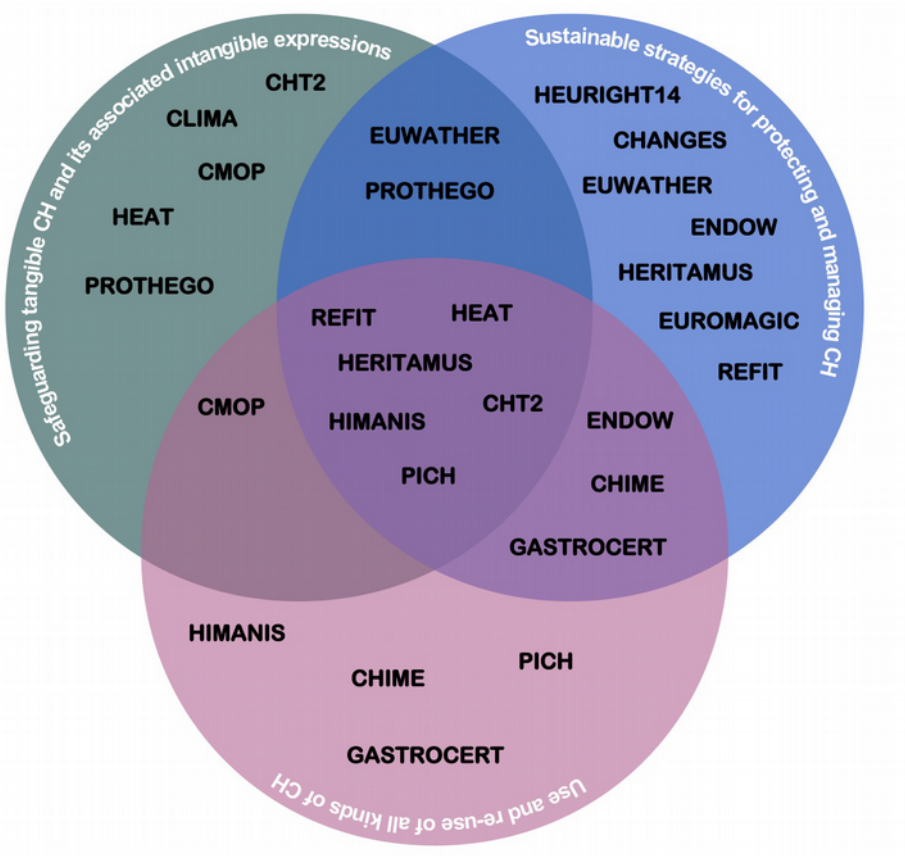


Figure 2: 16 Projects repartition between Heritage Plus research topics

7 JPI SRA: http://www.jpi-culturalheritage.eu/wp-content/uploads/SRA-2014-06.pdf

2.1. Safeguarding tangible Cultural Heritage and its associated intangible expressions

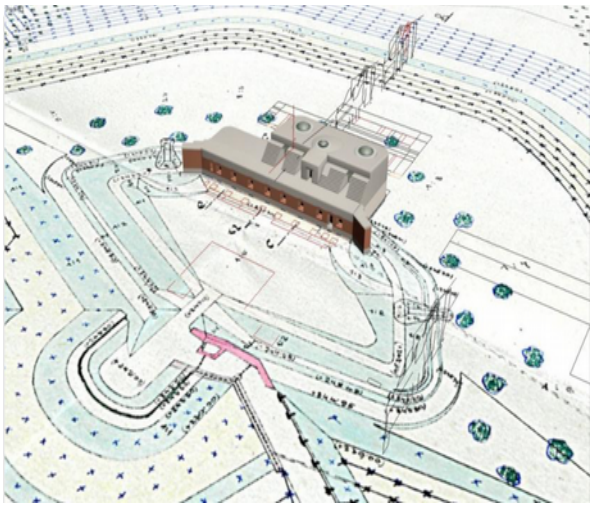
This topic was rated number one by five projects (CHT2, CLIMA, CMOP, HEAT and PROTHEGO) and rated as being part of the three main priorities by 4 additional projects. This topic's scope, sufficiently broad, resulted in very diverse projects, whose contribution to the topic can be organised in three main research orientations.

The first possible orientation was to develop technologies and procedures for long-term monitoring and maintenance of all forms of heritage. This could include modern heritage, as for the project CMOP, which investigated better conservation procedures for modern oil paintings, while considering the question of integrity and authenticity through the restoration works. This could also include the different historical and environmental contexts and historical layers of cultural heritage, for instance with the project CHT2, where researchers investigated how to combine these layers in a single model.

The second option was the investigation of changes in all forms of heritage, such as landscapes (HEAT, CHT2), sites (PROTHEGO), or structures and materials decay in a context of important environmental and global changes.

Then, several projects planed to develop decision support tools for a better maintenance of all forms of cultural heritage. As an example, tools for decision making based on integrated risk assessments were developed by the projects PROTHEGO and CLIMA, for a better preservation and monitoring of cultural landscapes and archaeological sites.

2.1.1. Cultural Heritage Through Time



CHT2 – 3D Model based on archival plan

It is common to develop 3D models for the management, visualisation and studying of cultural heritage structures and landscapes, but less common to integrate the temporal dimension in these models. The CHT2 project's consortium, composed by the University of Salamanca (USAL, Spain), the University of Newcastle (NCL, UK), the Stanislaw Staszic Scientific Association (SSSA, Poland), and the Politecnico di Milano (POLIMI, Italy), successfully pursued the goal to develop diachronic 3D models (4D models) allowing to study these structures through time, and used specific tools and platform to make these models accessible on-line. Four different sites, most of them endangered by urban expansion, tourism or natural erosion,

were studied during the research project: the walls of the city of Avila (Spain), in particular the Alcazar gate, the important complex of the Krakow Fortress (Poland), the Hadrian wall, and the Roman Circus of Milan (Italy), a very massive building not anymore existing, located in what is nowadays a very central area of the city, full of public buildings, offices, and private houses. This important work was also the opportunity to enhance the value of other kind of heritage, such as archival documents, paintings or images related to the studied sites. Several historical data were collected. For example for the Hadrian wall, old aerial images were reprocessed with modern photogrammetric techniques and compared with recent airborne photogrammetry campaigns. Local stakeholders, mostly represented by institutions in charge of managing and conserving the studied sites, were also actively involved in the research process, and participated to the development of these 4D models, whose objective is to be the basis for quantitative analyses, preservation and future planning policies.

Main outcomes

- **A general multidisciplinary methodology for creating 4D models of heritage assets** ranging from buildings, urban contexts or landscapes, integrating heterogeneous sources such as archival materials (multi-temporal aerial and terrestrial photographs, historical maps, ancient drawings and paintings, previous archaeological studies, etc.), and accessible through a 4D visualiser tool.
- **4D digital models of the four case-study heritage sites,** implementing the methodology mentioned above, and allowing to share multi-temporal information on the web, for remote analyses of lost or damaged assets, for dissemination purposes and aiming to provide the stakeholders with a 4D method for managing their heritage sites, planning possible future interventions and visualising changes due to anthropic activities or intervention, pollution, wars, earthquakes or other natural hazards.
- **Four concrete examples on how to develop active collaborations with local stakeholders** allowing the realisation of such models, with the contribution of non-technical disciplines.

Pathways to impact

The strong project connection with the local stakeholders and possible end-users for the creation of the four different models was an important guarantee of its future impact. Some of these stakeholders, with important local influence, already ensured and will continue to ensure the dissemination of the projects results: this is the case for the Museum of Avila and the City Council of Avila, but also Historic England (https://historicengland.org.uk) and English Heritage (http://www.english-heritage.org.uk). In the particular case of the Roman Circus of Milan, the collect of information necessitated by the project resulted in the rediscovery of a vast and complex monument, and a major

piece of Milano history, the Roman Circus of Milan. The proper authorisations for accessing to several private houses containing remains of interest for this study was obtained thanks to the Archaeological Superintendency of the Lombardy Region, and the created 4D models will certainly have a positive impact on the comprehension and the study of this invisible monument in the future. It is important to note that these models were created in open access, and easily transferable and accessible by the entire heritage community, but also by external stakeholders wishing to transfer these knowledge and methodologies to their own heritage sites and cultural landscapes.

Short name: CHT2

Countries: UK, Spain, Poland, Italy

Website: http://cht2-project.eu/

Funding awarded: € 589.601,00

Contact: gabriele.guidi@polimi.it

http://www.jpi-culturalheritage.eu/wp-content/uploads/CHT21.pdf

2.1.2. Cultural Landscape risk Identification, Management and Assessment

CLIMA - Tombs of the Kings (Paphos)

This project regrouped five partners from four countries (Italy, United Kingdom, Cyprus and Denmark) in order to promote a highly interdisciplinary research, based on a soil-oriented approach, and monitor the pressures on the archaeological sites due to anthropogenic (in particular agricultural activities), environmental, climate change and other potentially damaging factors. Through the combination of advanced remote sensing technologies, both from satellite and from drone and ground-based, with GIS application, the project consortium addressed the development of a multi-risk platform for mapping and long term monitoring of archaeological landscapes, providing periodic risk maps of the main threats affecting the archaeological sites. This interdisciplinary research consortium was composed by four universities – the Università degli studi della Tuscia, the University of Stirling, the Cyprus University of Technology, the University of Copenhagen – and one business company, Alma Sistemi (Italy), in order to facilitate a specific exploitation plan of the project results in terms of future commercial services. Three different case studies were chosen: the Roman town of Falerii Novi in Italy, the Roman Antonine Wall in

Scotland and the Greek-Roman town of Nea Paphos in Cyprus, all three endangered by agriculture activities, vegetation and Biomass accumulation, soil erosion, land movements or urban expansion.

Main outcomes

- **The development of an innovative tool for risks and threats to archaeological heritage management,** through a multi-risk WebGIS Platform, combining advanced remote sensing technologies, both from satellites and from drones and ground-based, with GIS application, for mapping and long term monitoring of the examined archaeological landscapes, providing periodic risk maps of the main anthropogenic and environmental threats affecting the archaeological sites.
- **An easily transferable risk assessment methodology,** resulting from an in-depth analysis of the main anthropogenic and environmental pressures affecting the archaeological sites, and of the potential of the most innovative remote sensing techniques, combining archaeological and geo-archaeological expertise related to knowledge and protection of archaeological cultural landscapes, combining experts of soil processes, land use and climate change and experts of Satellite and ground-based remote sensing.
- **Raise dramatically the awareness on available new technologies for landscape and heritage managers**, by combining and making available pre-existing knowledge and products owned by project's individual partners to individuals and organisations outside the immediate research community. Promotion of best practice and active involvement of local authorities, public and private end-users through workshops, meetings and round tables.

Pathways to Impact

Considering that at least 70% of archaeological sites in rural areas are subject to direct and physical pressures caused by agricultural activities, the CLIMA project offers to local authorities, site managers and potential end-users easily transferable cost-effective tools and methodologies to cope with these potential damages, in a context of steady decrease trend of the budgets allocated for the preservation of the archaeological remains. Thus, the choice of case studies including UNESCO World Heritage Monuments (Antonine Wall, Nea Paphos) was highly relevant. The project led to numerous follow-up projects, who are already planning to make use of the CLIMA platform on other sites, for instance several projects in partnership with the Superintendence of Archeology of the metropolitan area of Rome, the province of Viterbo and the Southern Etruria. In terms of economic benefits, the project will help determine a favourable economic impact on the rural areas concerned, and have a positive impact in areas torn between preservation and tourism concerns. The project's data, in open-access, freely available and very well suited for the realisation of future dedicated services and Apps for tourism. The exploitation plan

delivered by Alma Sistemi may benefit to the future delivery of such commercial services. The archaeological and environmental data collected within the CLIMA Platform are also an important tool of knowledge and example of best practice in a context of increasingly widespread use of cutting edge ground-based remote sensing techniques, and even more sophisticated and effective tools of investigation and monitoring inside of the archaeological research.

Short name: CLIMA

Countries: Italy, UK, Cyprus, Denmark

website: http://www.clima-project.eu/

Funding awarded: € 614.444,00

Contact: deangeli@unitus.it

http://www.jpi-culturalheritage.eu/wp-content/uploads/CLIMA1.pdf

2.1.3. Cleaning Modern Oil Paintings

CMOP - Paint samples © Judith Lee

The CMOP project occupies a very particular position in the Heritage Plus research landscape. It aimed to further our understanding of a specific kind of modern heritage – 20th and 21st-century oil paintings – presenting a range of challenging problems for conservation treatments and appropriate preservation strategies, that are distinctly different from those noted in paintings from previous centuries. These problems are often but not exclusively associated with unvarnished, unprotected surfaces, leading to the development of water, solvent and mechanical sensitivity which can render these works untreatable. Several internationally significant public collections are concerned, including works by renown artists such as Kandinsky, Malevich, Mondrian or Bacon. This phenomena is expected to increase as many 20th-century paintings will require cleaning for the first time, thus compromising longevity bust also public access to these works, while demand for exhibition and display is constantly higher. The consortium, composed by 5 partners – The University of Amsterdam and Cultural Heritage Agency of

the Netherlands (Netherlands), the TATE museum and Courtauld Institute of Art (United Kingdom), and the University of Pisa (Italy) – investigated in-depth causes and mechanisms behind the formation of paint sensitivity, developed methodologies for cleaning of sensitive modern and contemporary oil paintings, and applied these methodologies to conservation treatment of selected case study works of art.

Main outcomes

- **An inventory of degradation phenomena of modern oil paintings,** significantly contributing to an online tool helping to inform degradation phenomena noted on painting surfaces. The database includes visual examples of various phenomena as well as explanations for their likely causes, forming together a substantial resource for further research.
- **A model for the interpretation of the development of water sensitivity in modern oil paintings.** New analytical procedures were developed to investigate these materials with high accuracy and sensitivity, and new analytical methodologies were employed to investigate the physical properties and behaviours of model paints.
- **Valuable guidance, low risk options for conservation treatment, enhanced tools and methodologies for conservators and collections care professionals**, that are more appropriate for use on these paints. Three case study works of art by well-known international artists, and analytical investigations and cleaning tests performed on more than 50 other paintings, serving as useful examples of this newly developed approach, for conservators to take forward into studio practice.
- **The creation of continuous professional development, student training courses and workshops for conservators.** The project collaborated with postgraduate and undergraduate students and staff, and research outcomes were shared in university courses, incorporated into workshops and meetings involving stakeholders from the paint manufacture, heritage science, and most notably, conservation industries/professions. In addition, a short educational documentary film aimed at the general public reached over 30.000 people on social media.

Pathways to Impact

The knowledge generated by CMOP is significant to heritage researchers and practicians and will have an international impact in the following areas: new interpretation of development of conservation issues in oil-based works of art, tailored approaches to conservation treatment, new scientific methodologies and research streams. Current approaches to conservation treatments are not applicable to a great number of works because of their empirical nature. The combined outputs of the CMOP project will contribute to facilitate mass conservation treatments, thus improving and ensuring current and future generations access to works of art that are currently not anymore adapted for display. In this way the research benefits to the society at large – especially since these

paintings represent recent history and chronicle the significant and rapid changes in 20th-century European society – will be really important. The economical benefits for private and public collections will also be potentially significant, as the project's results will also minimise the loss of value of artworks by providing appropriate, low risk guidelines for cleaning, and guaranteeing the continue public access to these works. The project may also lead to the production of more sustainable products by paint manufacturers. Currently popular oil paints have a significantly higher risk for sensitivity to water and/or other solvents, and the project collaborated with the paint manufacturer Talens and W&N to compile new information on paint formulations and paint making processes. This collaboration may lead to immediate commercial applications. To conclude, CMOP contribution will help highlighting the urgency of these problems, in Europe and abroad, faced by important associated partners such as the Getty Conservation Institute.

CMOP
Cleaning Modern Oil Paints

Short name: CMOP

Countries: Italy, UK, the Netherlands

website: https://www.tate.org.uk/about-us/projects/cleaning-modern-oil-paints-0

Funding awarded: € 694.870,00

Contact: k.van.den.berg@cultureelerfgoed.nl

http://www.jpi-culturalheritage.eu/wp-content/uploads/CLIMA1.pdf

2.1.4. Heritage and Threat

Listings of principal threats to Heritage, such as the UNESCO list of World Heritage in danger[8], or the Global Heritage Fund's first general listing of Principal Threats to Heritage[9], generally identify six important threats to heritage: development, mass tourism, poor management, looting, war and conflicts and natural disasters. However, these listings assume "globally applicable sets of categories": they fail to distinguish between different geo-cultural facets of "that thing called heritage", and neglect important stakeholders playing a central role in the processes of heritage creation and protection (such as modern media). The HEAT project regrouped three universities and one NGO – the University of

HEAT - Aleppo Bazar - Gunvor Betting 1961; ToRS-Universität Kopenhagen

8 http://whc.unesco.org/en/158/

9 http://globalheritagefund.org/what-we-do/why-heritage/our_vanishing_heritage_principal_threats

Copenhagen (Denmark), the Alexandru Ioan Cuza University (Romania), the Università degli Studi di Bologna (Italy), and Ośrodek Badań Europy Środkowo-Wschodniej (Poland) – with the ambition and objectives to systematically analyse threats to heritage in four different localities and situations, and produce a sophisticated cross-cultural typology of threats to heritage in the form of a taxonomy of threats, included in a practical manuals for use, among others, by governmental organs, global organisations, NGOs or peace-keeping forces. End users, stakeholders and associated partners, such as the Danish Blue Shields National Committee, were strongly involved and associated in the definition of this taxonomy of threats, in order to give more insight into the multiple facets and situations were heritage is confronted to these different threats.

Main outcomes

- **The identification and categorisation of various threats to cultural heritage,** and corresponding stakeholder positions: conflict, economic development, ignorance and misunderstanding or conscious misuse etc. The multi- facetted approach, varied from theoretical and philosophical to empirical, through grass-root involvement to interaction with stakeholders in armed conflict (Kurdistan).
- **The publication of a taxonomy of threats**, in spring 2019, following an open access symposium in November 2018 (Shanghai, China), and identifying types of threats to/from heritage and the nature of conflicts that can lead to destructive processes of cultural heritage. A working hypothesis was formulated in the form of a threat complex explaining the process of formation and implementation of threats.
- **An online and GIS research tools for landscape and heritage management** developed in collaboration with the Politecnico di Milano, Centro per la Conservazione e Valorizzazione dei Beni Culturali, completed with an extensive and open-access database for dams in the Middle East.
- **A traveling exhibition,** which traveled through entire Denmark, raising the debate on the impact of migration movement and refugees on the perception of heritage, and several other planned exhibitions, with historical pictures from Syria, feeding contemporary discussions about refugee movements, their impact on heritage and the role of heritage in a post-conflict Syria. For the general public a documentary was also produced, titled: Flooded Heritage. The Impact of Dams in the Near East[10].

Pathways to Impact

It is strongly expected that the results of this projects will be used by different categories of stakeholders and have a positive impact on the way they interact with cultural heritage: These stakeholders include, for instance, policy makers and the military,

10 https://www.youtube.com/watch?v=PJoLKfWDDok

faced with strategic decisions as to their involvement in conflict zones or in post-conflict peace-keeping activities; non-governmental/non-state actors, such as Blue Shields, and their involvement in heritage protection; entrepreneurs entering a heritage-sensitive environment. This results transfer will be facilitated by the fact that threats were identified with and for stakeholders, including an important diversity of point of views. Efforts were also realised to broaden the results from a non-western point of view, by including a Chinese partner in the process (Fudan University, Shanghai).

HERITAGE AND THREAT

Short name: HEAT

Countries: Italy, Romania, Poland, Denmark

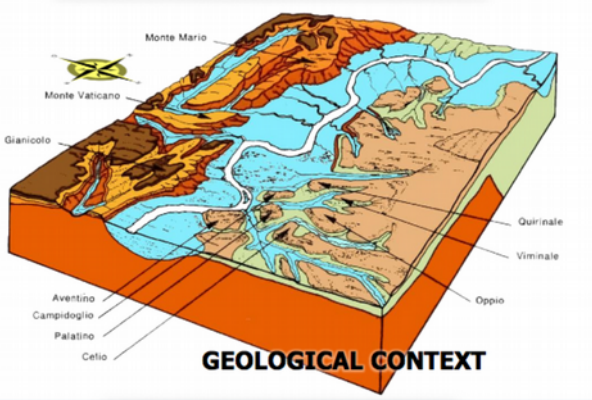
website: https://ccrs.ku.dk/research/centres-and-projects/heat/

Funding awarded: € 353.540,00

Contact: i-leder_tors@hum.ku.dk

http://www.jpi-culturalheritage.eu/wp-content/uploads/HEAT1.pdf

2.1.5. Protection of European Cultural Heritage from Geo - Hazards



PROTHEGO – Poster on Rome City Walls case study - ISPRA & Roma Capitale

The objective of the PROTHEGO project was to develop and validate an innovative multi-scale methodology for the detection and monitoring of European cultural heritage exposed to natural hazards, namely monuments and sites potentially unstable due to landslides, sinkholes, ground settlements, active tectonics as well as monument deformations, all of which could be effects of climate change and human activities. The novelty of PROTHEGO lied in the explicit focus on the context controlling slow-onset hazards responsible for cultural heritage damages, as these can be identified in advance, monitored and efficiently mitigated, in contrary to the catastrophic events. Therefore, the project focused on the representative list of sites inscribed on the UNESCO World Heritage List (WHL) in Europe, and applied novel space technology based on radar interferometry (InSAR) to monitor monuments and sites which were potentially unstable due to geo-hazards, including seismic, landslide, volcanic and subsidence as a first step, and extending the analysis to other hazards and in particular to flood as much as possible in a second step (depending on data availability). These WHL sites were finally ranked in order to prioritise the necessary resources, conservation, management and policies actions. The interdisciplinary consortium included three

research institutes – the Instituto Superiore per la Protezione e Ricerca Ambientale (ISPRA, Italy), the Natural Environment Research Council (NERC, United-Kingdom) and the Instituto Geologico y Minero de España (IGME, Spain) – and two universities – the Cyprus University of Technology (CUT, Cyprus) and the University of Milano-Bicocca (UNIMIB, Italy).

Main outcomes

- **The production of the most complete database related to European geo-hazards available so far for any future analysis.** This data collection was completed in collaboration with the European Geo Surveys, analysing available European databases, in order to define their consistency and usability for project purposes. A final geo-hazards database was implemented specifically for the project, available on the project website webGIS (map viewer[11]) and an updated impact scenario in Europe of Natural Hazards vs Cultural Heritage was produced.
- **The creation of digital factsheets for each UNESCO World Heritage List site within Europe,** highlighting the information available and the potential susceptibility of the location to a selected number of geo-hazards, and easily downloadable in .pdf on the website. To that end, PROTHEGO analysed datasets from the over 10 years-long project from the European Space Agency (ESA) and the EU Terrafirma[12] and PanGeo[13], along with other InSAR data derived products.
- **A novel methodology to incorporate PS-InSAR data into continental-scale risk analysis of UNESCO World Heritage List (WHL)** was developed and tested through the project.
- **A network of public and private decision-makers and end-users involved in planning and management of cultural heritage sites was created**, culminating in a final dissemination event “European World Heritage Sites affected by geo-hazards — satellite monitoring future challenges: the PROTHEGO project contribution” hosted at the UNESCO's headquarters in Paris in March 2018.

Pathways to Impact

The project's approach was implemented in more than 400 sites of the UNESCO World heritage List in geographical Europe, and will have a strong potential impact on extra-european sites, as members of the consortium are involved in the conservation and monitoring of some of the most important world heritage sites abroad (Petra, Machu Picchu, Bamyian, Lalibela, Bayannuur, Vardzia, Katsky, Rapa Nui, Kogurio, Seokguram etc.). The project's results are highly representative and will be easily transferable to all these sites. The project revealed also that there was an important data coverage gap for

11 http://mapapps2.bgs.ac.uk/prothego/index.html
12 http://www.terrafirma.eu.com
13 http://www.pangeoproject.eu/

European UNESCO WHL sites. At the end of 2016, only 37% of the analysed sites were covered by existing datasets and/or published literature. In the future, the new multi-criteria methodology created by PROTHEGO will be easily adapted as new datasets will become available, thanks to its important flexibility. In addition, the PROTHEGO project involved very different kinds of stakeholders and associated partners: policy makers, scientific community and end-users. Policy makers will contribute implementing national and/or European policies and developing common frameworks, directive, guidelines or standards (UNESCO, ESA, EGS, MIBACT) thanks to the project's results: the determination of areas exposed to potential risks and their evolution in time also offers crucial and low-cost information for decision makers, to protect and manage cultural and heritage sites from natural hazards and it is expected that further and deeper analysis will be carried on in the near future, pondering the implementation of mitigation measures in specific sites. The scientific community and end users will contribute transferring the scientific approach to practical conservation works, involving large companies, SME, consultants... New job opportunities are already foreseen within this new segment, especially through the creation and implementation of downstream services in the field of Cultural Heritage, natural hazards and space monitoring, using as much as possible open and free data (i.e. Copernicus[14]). Finally, the project contributed to a consistent knowledge transfer between space and earth sciences, and cultural heritage conservation sciences, which will have important impact in the future in terms of space-based heritage services creation.

Short name: PROTHEGO

Countries: Italy, UK, Spain, Cyprus

website: http://www.prothego.eu/

Funding awarded: € 598.680,00

Contact: claudio.margottini@gmail.com

http://www.jpi-culturalheritage.eu/wp-content/uploads/PROTHEGO1.pdf

14 http://www.copernicus.eu/

2.2. Sustainable strategies for protecting and managing Cultural Heritage

This topic was rated as first priority by a vast majority of Heritage Plus projects (7 projects; HEURIGHT14, CHANGES, EUWATHER, ENDOW, HERITAMUS, EUROMAGIC, REFIT). Two of these projects (EUWATHER and REFIT) focused on heritage landscapes, but also related sites, buildings and artefacts investigating the significance and the values they hold for individuals and communities, but also how these are influenced by global changes. Within the broader framework of this topic, they studied opportunities for production, recognition, revitalisation and regeneration of these landscapes, including their translation into and connections with digital heritage.

Such opportunities were also studied for other specific forms of heritages, as for example the project HERITAMUS, with Fado and Flamenco, or the project EUROMAGIC with the magic lantern. For all these project, research activities were backboned by strong interactions and dialogue with heritage users and managers, studying how these interactions influence the management of heritage and its environment, and trying to understand the meanings that cultural heritage holds for people and how they perceive, use and interpret it. Some additional projects developed besides research activities, methodological tools or frameworks for an “integrated” management of heritage (CHANGES), including all these different categories of actors. Furthermore, the important question of changing rights and responsibilities around cultural heritage was also investigated by projects such as HEURIGHT14 and ENDOW.

2.2.1. The Right to Cultural Heritage – Its Protection and Enforcement through Cooperation in the European Union

HEURIGHT - Ajdukiewicz Zygmunt, "Lyrist", Kronprinzwerk, vol. 19, Wien, 1898

The right to cultural heritage constitutes one of the most important but at the same time less defined areas of European law and policy. “Culture” was introduced for the first time as part of the integration process by the Treaty of Maastricht (Article 128) but in fact, the lack of the Community's competences in the area of culture and cultural heritage has led to very limited common strategies in these areas, mostly referring to the subsidiary action supplementing Member States policies. HEURIGHT14 investigated to what extent the right to cultural heritage can be seen as a right protected and enforced within the body of EU law, comparing this law with

other transnational regimes, assessing its uniqueness and identifying the role sustainable strategies for the protection and management of cultural heritage play in the process of europeanisation, integration and EU enlargement. Therefore, it focused not only on positive law and jurisprudence, but also on soft-law rules, diplomacy and cultural cooperation, as possible alternative devices for fostering inter-cultural dialogue and understanding. Three countries were included in the transnational research consortium: Poland (the University of Fine Arts in Poznań), United Kingdom (the British Institute of International and Comparative Law, BIIC) and Italy (University of Trieste, Department of Legal Science, Language, Interpreting and Translation Studies, IUSLIT). Choosing these three countries was not accidental, as they represented significantly different cultural, political and legal traditions in relation to the protection, management and cooperation of cultural heritage matters. In addition, the consortium analysed how different existing mechanisms underpinning cultural heritage management (digitisation, databases, virtual museums, travelling exhibitions, open access resources, joint management initiatives, etc.) were actually used and could be reinforced to improve the full realisation of the right to cultural heritage. The question of the resolution of cultural heritage disputes, for instance overseas claims over cultural objects held in the United Kingdom, was also investigated during the project.

Main outcomes

- **Cross-cutting insights on how heritage is defined, used and managed in decision- and policy-making** and avenues to strengthen its protection, access, and governance, especially through the elaboration of recommendations and guidelines – openly accessible via an online platform – concerning best practices for the use of cultural heritage.
- **A new digitised heritage platform - an online database comprising historical photographic archives in Central and Eastern Europe,** preserved at the Institute of Art of the Polish Academy of Sciences in Warsaw, and documenting the non-existent cultural heritage of Europe's Eastern Borderlands, while interrogating the access to this forgotten and contested cultural heritage through digital technologies.
- **An external network of experts, stakeholders, public institutions and organisations in the field of cultural heritage** (UNESCO, UNIDROIT, UN Human Rights Council, International Law Association, European Parliament, European Commission, European Investment Bank, Ministries of culture).
- **Several national and regional case-studies:** Poland, Ukraine and Eastern Partnership; Poland and Germany cultural heritage legal relations; access of cultural heritage in the United Kingdom, including in its external relations (with Europe but also with former colonies) and through digitisation; European Union and the Western Balkans (Slovenia, Croatia, and Serbia).

Pathways to Impact

Such a variety of case-studies and approaches enabled the better comparison and understanding of the current state of art in the field, both on local and European levels, as well as on the implications that this state of art may have on geo-political relationships within and outside the EU. The potential impact of transferring to the public at large these academic results is high, especially in a critical international context (EU enlargement in Western Balkan countries, Brexit) necessitating a better understanding and awareness on the existence of possible alternative methods in the enforcing and protecting of cultural heritage. These results may be of great relevance to heritage users and managers, policy makers, and contribute to the improvement of existing legal frameworks and guidelines.

HEURIGHT

Short name: HEURIGHT14

Countries: Italy, UK, Poland

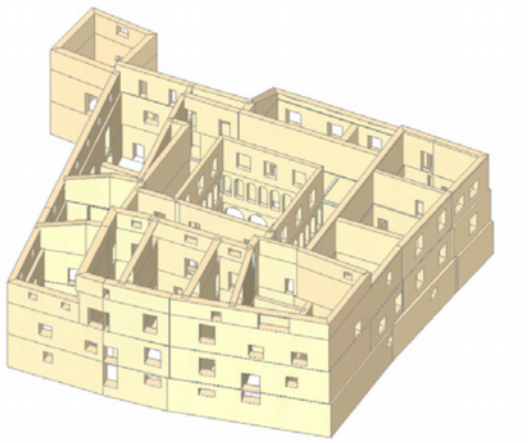
website: http://heuright.eu/

Funding awarded: € 399.478, 00

Contact: heuright@gmail.com

http://www.jpi-culturalheritage.eu/wp-content/uploads/HEURIGHT1.pdf

2.2.2. Changes in cultural Heritage Activities: New Goals and benefits for Economy and Society



CHANGES - evaluation of the seismic vulnerability, Besta Palace, Teglio

The project's objective was to demonstrate that, in the field of heritage preservation and the construction sector, Planned Preventive Conservation (PCC) allocated and used existing resources for heritage management more efficiently than curative conservation, by means of creating synergies and advantages for a greater number of actors: i.e. contractors, professionals, property manager, estate owners, regional and local authorities etc. 5 partners from 4 different countries – Italy (Politecnico di Milano and Foppoli Moretta e associati consulting engineers), Belgium (University of Leuven), The Netherlands (Technische Universiteit Delft) and Sweden (Uppsala University) – shared their expertise, in order to advance our understanding of cultural heritage as a driver of regional local inclusive and sustainable development. Their respective experiences demonstrated, that in a context of scarce financial resources for cultural heritage, more funds could be counter-

productive and did not always triggered innovation, unless a number of conditions to make funding a far more effective tool for change were defined in advance. They based their research on the comparison of previous Associated Partners' practical experiences (Monumentenacht in Belgium and the Netherlands, Distretti Culturali in Italy, and Halland Model in Sweden), in order to achieve the realisation of a theoretical model and define a common framework. They focused their investigation on the concept of “trading zone”, which represents the arena where negotiations are conducted between actors' various policies, values, legal frameworks and resources, between cultural heritage, economic growth and sustainable development priorities, and between conservation activities and valorisation strategies.

Main outcomes

- **A tool for a reliable evaluation of maintenance costs,** in the form of a a simplified chart of conservation processes, generated as a conceptualisation of the previous partners' experiences, and an evolution of the new Maintenance Cost Analysis service, implemented by the Associate Partner Monumentenwacht Flanders.
- **A set of simple rules for policy makers and influencers for more effective and sustainable funding policies,** aiming to guarantee that grants become a tool for change, based on the cost-effective analysis of the previous models.
- **The shift from a traditional vision in which conservation was just a duty without worries for generated income, to a complex and multifaceted system**, mainly controlled by financial mechanisms, rooted in the vision of an inclusive society, where groups of practitioners count and not just market, creating surpluses but also indirect non-market values.

Pathways to Impact

The project's outcomes will be highly relevant for stakeholders and society. They demonstrated that heritage protection and activities could be used as a basis for innovative initiatives and services in the construction industry at large, in the creative industry and for local economical eco-systems. CHANGES provided guidances in finding new sustainable markets as well as in defining the required knowledge necessary to implement new profit-oriented heritage-based services and activities, leading to several potential job creations. The participation of a private company as Foppoli Moretta in the consortium was the condition to facilitate the transfer of expected research outcome to the private sector, and to foster the opening of new sustainable markets. The diversity of models and experiences used and analysed, in order to design these guidances, will avoid the risk of stopping at solutions which apply only in the frame of specific contexts separated from the complexity of reality, and will have a significant impact on knowledge gain and the dissemination of these new knowledges to heritage managers, the construction sector and the wider smart economy for built heritage conservation.

changes

Short name: CHANGES

Countries: Italy, the Netherlands, Belgium, Sweden

website: http://www.changes-project.eu/

Funding awarded: € 653.873,00

Contact: stefano.dellatorre@polimi.it

http://www.jpi-culturalheritage.eu/wp-content/uploads/CHANGES1.pdf

2.2.3. Re-evaluating the European Secondary Rivers and Canals as Cultural landscape

The potential of secondary rivers, canals and minor hydrography for sustainable development of urban, rural and less developed regions is still largely underestimated. Yet, they are a very interesting mean to foster sustainable eco-tourism and improve the relationship between communities and their natural and cultural heritage. This is why EUWATHER intended to co-design, with local stakeholders (locals and visitors, public and private actors etc.) a framework able to reveal the cultural and artistic heritage value of minor waterways, and promote associated ways of communicating this heritage to a range of audiences. The consortium regrouped case-studies and partners from four countries – Italy (Universita Ca' Foscari di Venezia), United Kingdom (University of Brighton), the Netherlands (University of Leiden) and Spain (University of Girona) – in order to deal with "the silent and hidden impoverishment of a significant aspect of our continent's cultural heritage", linking this heritage to more intangible aspects and emotional relationships affecting what is commonly understood as the "sense of place". Thus, the tools and services co-crated through the project's research – consisting mainly in an open-source platform allowing the creation of digital itineraries – aimed to have a strong impact in terms of societal benefits and improvement of local citizens and actors' quality of life.

EUWATHER - Burci in the Battaglia canal - Archive Museum of River Navigation, Battaglia Terme, c. 1950

Main outcomes

- **A project database publicly available through an open-source platform linked to the project website**, allowing access to all data collected during the project and reversed in the SDI (Spatial Data Information).
- **11 new digital itineraries for Italy, Spain, UK and the Netherlands, downloadable for**

free from the project website as well as from the platform, co-designed with local communities and stakeholders through various workshops and meetings.

- **A methodology and a reference model to start digitising the European minor waterways**' heritage, promoting innovative ways of valorising it through IT tools.
- **A "manual for practitioners" aiming at stimulating the production of similar trails in Europe**, freely downloadable from the website, explaining how to build a new digital route for tourist purposes along minor waterways and valorise its tangible and intangible assets.

Pathways to Impact

EUWATHER provides tools and knowledge to policy makers, resource managers and businesses, with the objective to direct their investments in waterways in ways that yield sustainable results in social, cultural, environmental and economic terms. The outcomes of the project will not only allow a better management of natural and cultural landscapes in the future, but also contribute in this way to boost local economies and create marketing products and jobs opportunities. Results were conceived to be easily usable, replicable and freely accessible, ensuring their future sustainability: as an example, the Hollinwood Canal Society already produced and additional heritage itinerary, following the EUWATHER guidances and methodologies, and several organisations expressed their interest in producing such trails in the future. All these itineraries will be awarded the "Waterways Explorer" brand, a more appealing brand chosen by partners to replace the less comprehensible "EUWATHER" acronym, in order to strengthen future impact and dissemination of the project's achievements. The project had also a strong impact for involved stakeholders and associated partners. Their commitment to the project was important, especially sine none of them were equipped by themselves to undertake extended research into complex subjects such as the social, cultural, environment and economic development of their waterway assets. Their involvement all along the research process guarantees that EUWATHER will have multiple and sustainable impacts across rural regions characterised by historic waterway networks. Finally, the exchange and dissemination of knowledge allowed by the project to a large number of stakeholders may contribute substantially to a new pan-European discourse on freshwater management.

Short name: EUWATHER / Waterways Explorer

Countries: Italy, the Netherlands, Spain, UK

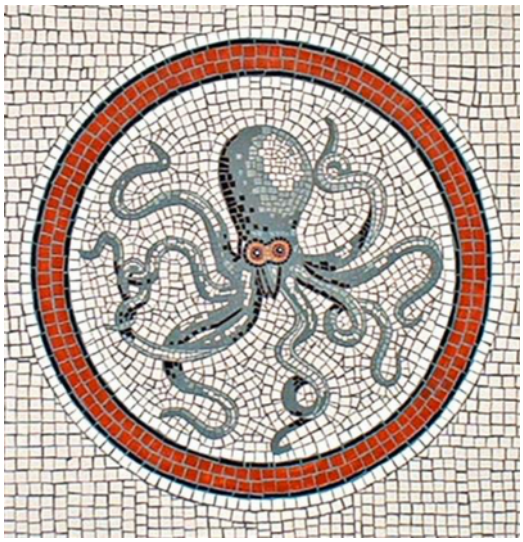
website: http://waterwaysexplorer.org/

Funding awarded: € 666.217,60

Contact: euwatherproject@unive.it

http://www.jpi-culturalheritage.eu/wp-content/uploads/EUWATHER1.pdf

2.2.4. Enhancing access to 20th Century cultural heritage through Distributed Orphan Works clearance



ENDOW - Tromp l'oeil Pompeii floor mosaic - www.adriancard.com

Mass-digitisation and access to 20th Century cultural heritage orphan works is severely restricted by the potential subsistence of copyright and related rights. Right-clearance is generally performed by cultural institutions and other actors following a "diligent search", but despite several European directives intended to facilitate digitisation (EU Orphan Works Directive, 2012/28/EU), right clearance remains overly expensive, time-consuming and, ultimately, a critical roadblock for cultural institutions. The idea of ENDOW was firstly to analyse the legal requirement of "diligent search" across the orphan works legislations of the 15 countries members of Heritage Plus, and highlight best practices. In addition, the project aimed to facilitate the diligent-research process by creating a tool transferring substantial part of the labour costs to end-users, applying and experimenting a cost-effective solution based on crowd-sourced collaboration. Therefore, the projects built on several existing initiatives, for instance an initiative allowing to perform legally binding searches in patent law, or the British Library "Mechanical Curator" enabling crowd-sourced classification of images, which in turn were offered for free reutilisation to users. Thus, ENDOW intended to foster all kind of re-uses of artistic materials currently hidden and forgotten in dusty archives, giving a second life to a major part of Europe's cultural heritage. The project consortium included four partners from three countries: the Bournemouth University and the Glasgow University (United Kingdom), the University of Amsterdam (the Netherlands) and the Bocconi University (Italy).

Main outcomes

- **The analysis of the legal requirements of "diligent search" across the orphan works legislation of 20 countries,** (Austria, Belgium, Cyprus, Check Republic, Estonia, France, Germany, Greece, Ireland, Italy, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovakia, Spain, Sweden, the Netherlands, United Kingdom), compiling a list of 1 400 sources and helping to understand how EU Member States have implemented the orphan works Directive as well as other regulations in force – if any – in those countries.
- **The identification of best practices of orphan works clearance across cultural heritage sectors,** through different surveys and one report.
- **The creation of 20 flowcharts, reflecting the diligent search logical framework for each country studied,** forming the base for the implementation of the platform.

- **A cost effective de-centralised platform enabling cultural institutions across Europe to source information from end-users and determine the copyright status of works contained in their collections:** The Endow platform[15], including forms for the 20 jurisdictions, guides the "diligent searcher" through the process and allows him to print out a .pdf with all steps performed, which is what is required by the legislation.

Pathways to Impact

The impact of the orphan works problem was estimated to "seriously affect" the services offered by 88% of European libraries, 94% of archives and 95% of museums[16]. The cost of performing diligent search was estimated between € 40 million and 155 million per year[17] for British institutions, and the benefits of using orphan works would range in the UK between £32m and £129m per year to archives, museums, and other users. The indirect benefit to growth and business creation was, in turn, estimated to range between £13m and £91m per year on average[18]. By streamlining and automating as much as possible this process and creating a community of users through crowdsourcing, the project set-up the conditions to maximise its impact on cultural institutions. The findings of the project showed that a sizeable portion of the necessary sources to conduct diligent researches were not accessible on line, putting into question the viability of the whole Diligent Search system as well of the EU Directive, suggesting the need for new legislations in the near future. The excellence of the research performed was recognised by the JPI-CH Scientific Committee. In 2014, the Italian partner Maurizio Borghi was selected to receive the Google Faculty Research Award, to support his research on developing efficient mechanisms for clearing copyright in mass digitisation projects. In addition, following the end of the project, a studentship was awarded by the IT department of Bournemouth University, in order to realise a feasibility study and optimise the ENDOW Platform by automatising, as far as possible, the search of the sources through federated search. This will ensure a greater impact of the platform in the future, allowing a new sustainable mass availability of new cultural heritage materials.

Short name: ENDOW

Countries: Italy, the Netherlands, UK

website: http://diligentsearch.eu

Funding awarded: € 524.252,00

Contact: mborghi@bournemouth.ac.uk

http://www.jpi-culturalheritage.eu/wp-content/uploads/ENDOW1.pdf

15 http://diligentsearch.eu/diligent-search-tool/#

16 JISC 2009, In from the Cold, An assessment of the scope of 'Orphan Works' and its impact on the delivery of services to the public, http://www.jisc.ac.uk/media/documents/ publications/infromthecoldv1.pdf

17 UKIPO 2012, supra n14; Stratton, B. (2011), Seeking New Landscapes: A rights clearance study in the context of mass digitisation of 140 books published between 1870 and 2010 (London: British Library): Vuopala 2010, supra n2

18 www.ipo.gov.uk/consult-ia-bis1063-20120702.pdf

2.2.5. (In)Tangible: a research on the relationship between tangible and intangible heritage

HERITAMUS - Fado players - Armandinho, Martinho d' Assuncao, Joao da Mata & Berta Cardoso

Since Fado and Flamenco have both been registered on the UNESCO intangible World Heritage List between 2010 and 2011, a significant amount of historical sound recordings have been made available for study and dissemination, necessitating the implementation of sustainable strategies for protecting, managing and giving access to this "new" cultural heritage: indeed, more than 100.000 recordings have been identified during the registration process. Three teams from three different countries – Portugal (Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa), Spain (Universidad de Sevilla) and France (Centre de Recherche en Ethnomusicologie / Centre National de Recherche Scientifique) – united their efforts and research, in order to design an innovative digital tool/software, aiming to support an innovative approach through a cooperative research program with the stakeholders of Fado in Portugal and Flamenco in Spain, with the final objective to co-produce new knowledge. Gathering all kinds of actors in a "parliament of things" that best displays the networks of actors, the project focused specifically on the relationship between heritage practices, historical sound documents and current uses and re-uses of community heritage, trying to bridge the gap between "heritage", a process of display of others' tradition in a sterile or generic form, and "living practice", a transmitted knowledge that is constantly living and changing.

Main outcomes

- **Five datasets of historical sound recordings containing more than 30.000 items,** resulting from intensive fieldworks, informal conversations with practitioners and stakeholders, recognised by the communities of practice, and partly published in peer-reviewed articles.
- **The access to historical documents considered lost,** and the digitisation and restoration of a body of more than 600 audio items of which 70 deserved specific restoration treatments for later publishing.
- **An exhibition in the Fado Museum in Portugal, titled "Automatic Music Machines"** reaching at least 3000 persons.
- **An innovative tool providing access to complex interconnected historical and ethnographical data on tangible and intangible heritage**, facilitating the organising,

the structuring, and retrieving of these data and deepening knowledge about their practices, shaping their “parliament of things”. This tool was meant to be used by the general public, local communities, stakeholders and researchers.

Pathways to Impact

The advancement of knowledge allowed by HERITAMUS, and the production of a tool, which is the first of this kind within the heritage research community, will have an impact not only on the academic circles, but especially on stakeholders, the community of practice, and the general public and private actors. HERITAMUS approach and tool were created to be easily replicated in different contexts and other manifestations. Future research projects have already been scheduled among consortium members, planning to exploit the original source code and implement its structure in other programs: for instance, the french team member Nèdra Melloulli already conceived a project intending to further develop the tool for educational and cultural promotion in Maghreb countries. The impact on stakeholders and the community was also guaranteed. The tool is efficient for integrated management of tangible and intangible heritage in museological and archival institutions, allowing future actions such as exhibitions, monographs or intervention plans. External organisations and national/regional institutions, some of which really large, showed interest in adapting the tool. Finally, the results of the HERITAMUS project benefited to the general public. They contributed to the re-appropriation of lost and forgotten heritage, putting the general public's contribution at the centre of the process. Then, with the data and material made freely available through the project, HERITAMUS facilitated potential commercial re-uses of these data (as an example through CDs) and larger displays (exhibition and documentaries). In order to guarantee more substantial impact of the project, taking into consideration the agendas of multiple researchers and community members, the planned final project's workshop will be held in November 2018.

Short name: HERITAMUS

Countries: France, Portugal, Spain

website: http://heritamus.fcsh.unl.pt/

Funding awarded: € 243.079,00

Contact: secb@fcsh.unl.pt

http://www.jpi-culturalheritage.eu/wp-content/uploads/HERITAMUS2.pdf

2.2.6. Magic Lantern Slide Heritage as Artefacts in the Common European History of Learning

EUROMAGIC - Glass slide - Digital Image © 2013 Lucerna Magic Lantern Web Resource CIC.

The EUROMAGIC project's overall objectives consisted in promoting sustainable use and management of magic lantern slides held in various European collections, constituting a massive, though largely neglected and underused pan-European repository of heritage materials. The project had different connected objectives. The first one was to produce and enhance knowledge about these slides, researching the intangible context in which they were produced and used. The second was to facilitate access to this heritage, through digitisation, and by establishing a system of classification, developing and implementing standard vocabulary for description and cataloguing, and working with various stakeholders (archivists, film producers, editors, researchers etc.), in order to develop shared semantics and definitions for documentation, digitisation and access, and evidence their respective requirements. Once this heritage made accessible, the last objective was to identify strategies that heritage institutions might apply in order to maximise the impact of their slide archives, especially through innovative forms of creative re-uses, and creation of protection-through-use projects (Apps, Animations, Re-enactments etc.). These creative re-uses, such as artistic performances, facilitated the dissemination of the project's outcomes, and their transfer to individuals and organisations outside the immediate research community (creative industry, journalism, art). Three countries composed the project transnational consortium: United Kingdom (University of Exeter), Belgium (Antwerp University) and Spain (University of Girona and Salamanca).

Main outcomes

- **An important contribution to Lucerna[19],** a collaboration between lantern researchers and an online sustainable resource on the magic lantern. More than 30.000 illustrated slides have been entered into this web resource, guaranteeing long-term preservation and access to these digital data.
- **A general methodology for the description, cataloguing and digitisation of slides,** comprising a codebook for the description and cataloguing of slides developed and

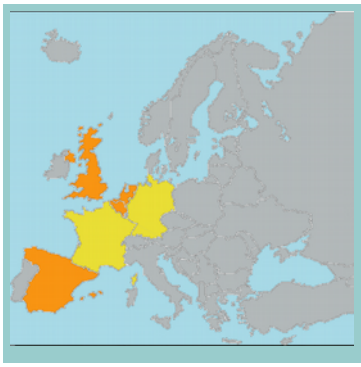
19 https://www.slides.uni-trier.de/

tested by the Girona an Salamanca teams[20], two manuals for preparing digital files to be entered into Lucerna, and an extensive document providing recommendations for the digitisation of slides[21].

- **Several creative re-use and protection through use activities and collaborations,** documented on a project DVD, of which an important temporary exhibition in free access in Filmmuseum Girona, attracting more than 10.000 people.
- **The *Linternauta* App[22], which provided a new way of giving access to magic lantern** slide with the aid of an educational tool, to be used, among others, by museums to valorise their collections.

Pathways to Impact

The project's impact went far beyond the planned activities. Project members were quite successful in promoting Magic Lantern research among scholars from neighbouring disciplines, thus demonstrating the potential lantern slide collections hold, to connect national and regional museums, libraries, archives to new and international audiences. The very high number of associated partners in the project (21), mostly from the heritage sector, and the strong interest their shown in the project, already resulted in various project presentations and activities, and will allow future collaborations such as shared exhibitions, book publications and cultural events for an academic as well as a broader audience of devotees of old and new media. The open-access results were also conceived to be used for commercial purposes, by SMEs, to develop forms of creative re-use of cultural heritage, as with the *Linternauta* App. The future impact of the project will also take another dimension after the important grant awarded to the Antwerp team in Belgium in 2017: they were attributed 3.7 million Euros for a research project on the history of the magic lantern as a mass medium in Belgium, project that will further contribute to using the magic lantern slide heritage[23].



Short name: EUROMAGIC

Countries: UK, the Netherlands, Spain, Belgium

website: http://a-million-pictures.wp.hum.uu.nl/

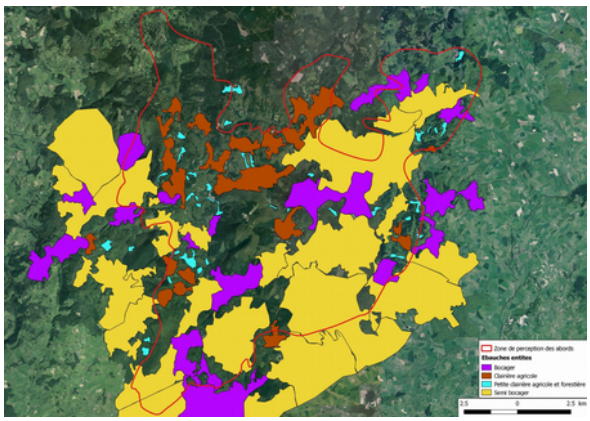
Funding awarded: € 249.911,20

Contact: F.E.Kessler@uu.nl

http://www.jpi-culturalheritage.eu/wp-content/uploads/EUROMAGIC1.pdf

20 https://a-million- pictures.wp.hum.uu.nl/wp-content/uploads/sites/210/2017/09/Lopez-and-Frutos_Presentation.pdf
21 http://a-million-pictures.wp.hum.uu.nl/category/publications/guidelines/
22 http://linternauta.docenciavirtual.es/
23 https://www.uantwerpen.be/en/projects/b-magic/

2.2.7. Resituating Europe's First Towns: A case study in enhancing knowledge transfer and developing sustainable management of cultural landscapes



REFIT - Agricultural diagnosis, Bibracte, France

REFIT consisted in a cooperation between three project partners from three countries: Durham University (United Kingdom), Bibracte EPCC (France) and Universidad Complutense de Madrid (Spain). Through four different case-study landscapes – Bibracte (France), Ulaca (Spain), Bagendon and Salmonsbury (United Kingdom) – they investigated issues regarding Europe's cultural landscapes in a broader manner. The consortium tried to understand and integrate local stakeholders as active creators and beneficiaries of cultural landscapes, which is an essential but under-developed element of heritage research. Through research focusing on some of the most significant monuments in European history (over 200 monuments can be defined as "oppida" in Europe), the research partners explored innovating use of digital media, and ways, through constructive dialogue, to situate stakeholders within research. In addition, they explored alternative strategies to enhance engagement with the cultural heritage of integrated landscapes and ensure its sustainability. The project had to face high diversity in communities' priorities and perceptions of landscape and heritage. The consortium faced the sometimes conflicting requirements with heritage protection, of agriculture and farming, economic sustainability, public access, wildlife diversity and respect of landscape character. Through four important workshops, the projects partners took the opportunity to assess the impact of varying national, regional and localised management strategies applied at each case study.

Main outcomes

- **An in-depth qualitative and quantitative analysis of stakeholders interactions in the four case study landscapes,** followed by an additional analysis of 3 landscapes without oppida in England, and involving interviews, questionnaires, mind- mapping exercises and small focus groups. These included 985 respondents to the questionnaire and 192 in-depth interviews, and resulted in a publication[24].
- **Creation of guides to these cultural landscapes to complement the stakeholder engagement.** They include information, not only on heritage, but also on ecology, agriculture and integrate stakeholder perspectives through interviews. These guide come in two formats: downloadable field guides .pdf to be used on-site; digital

24 Connecting landscapes: Examining and enhancing the relationship between stakeholder values and cultural landscape management in England, Moore T and Tully G, Landscape Research, Taylor and Francis Online, UK, 2017

interactive field guides with enhanced content for remote access.

- **Creation of exhibitions accessible to the wider audience:** a travelling exhibition, transferred to a digital one on the project website, and to a permanent exhibition at Salmonsbury, where the Gloucestershire Wildlife Trust developed a visitor centre, including information on the archaeology, ecology and farming, with digital engagement resources, and where REFIT and JPI are specifically mentioned.
- **A final monograph describing the process** published by the Bibracte monograph series in 2018/2019.

Pathways to Impact

Some of REFIT findings had strong resonance beyond oppida landscapes, as it was shown by the 3 comparator landscapes without oppida integrated to the study. The research approach has widespread implications and transferability to other cultural landscapes. As an example, it led in the UK to a spin-off project with Historic England to assess how core government agencies (Natural and Historic England) might develop their digital resources for land managers and farmers. Moreover, REFIT's advocacy for emphasising the integrated nature of landscapes impacted directly stakeholders' perception and convinced them, in particular political actors, to place heritage, and more particularly landscape, at the heart of the territory project: for instance, REFIT partners continue to act as consultants on archaeological aspects of the landscape for the Gloucestershire Wildlife Trust. Many more stakeholders involved in the project's activities (more than 500) will benefit from the results in the future and contribute to the project's impact: the Wildlife Trust, included in the Associated Partners, represented alone a potential transfer to 47 other Wildlife Trusts in the UK, impacting 800.000 members. The strategies and tools conveyed by the project, and the knowledge transferred to stakeholders will contribute to a sustainable improvement of practices in public bodies in charge of cultural landscapes management, and the integration of MA students all along the project guaranteed the dissemination of these methods in the future. The project will finally enhance benefits to the cultural and economic life of the regions where oppida are located, allowing the dissemination by private actors (B&Bs; museums; wildlife groups) of the produced set of guides, and fostering the development of marketing products by SMEs through sustainable partnerships will local stakeholders.

Short name: REFIT

Countries: France, UK, Spain

website: https://www.refitproject.com/

Funding awarded: € 354.079,00

Contact: t.h.moore@durham.ac.uk

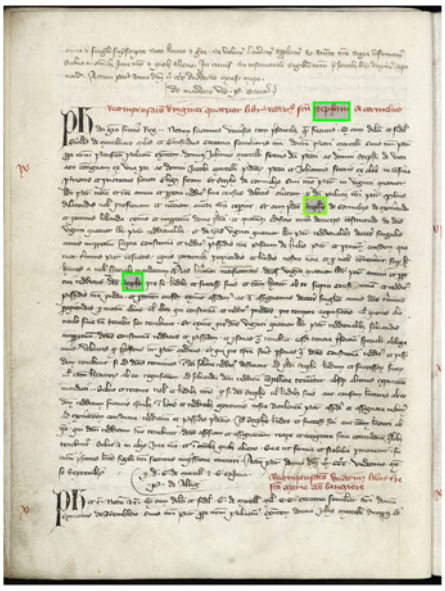
http://www.jpi-culturalheritage.eu/wp-content/uploads/REFIT2.pdf

2.3. Use and re-use of all kinds of Cultural Heritage

Even if this topic wasn't chosen as first priority by a majority of research projects – only four projects rated this topic as first priority (HIMANIS, CHIME, PICH, GASTROCERT) – this topic remains highly transversal, and an important number of additional projects (6) rated this topic in their second or third priorities. The questions of the exploration of the contested and conflicting issues around access to cultural heritage, or of the use and re-use of heritage from different fields of study, were already addressed by the previous topic. Through this topic, the projects CHIME and GASTROCERT also question the balance between tourism, conservation, sustainability and authenticity, and the opening to other fields such as art, art history, science, digital heritage, in order to move the field towards truly interdisciplinary heritage studies. Digital heritage was also the main concern of the project HIMANIS, exploring ways to facilitate access to tangible heritage (Manuscripts) and their intangible expressions, through innovative digital instruments. In addition, the topic also addressed the balance between historical integrity and authenticity to ensure that the different interpretations and management of heritage in a pluralistic society are taken into account. Projects such as PICH studied the rebalancing between surrounding natural and cultural environments and societal developments, including regulation and an exploration of planning and architecture/design issues.

2.3.1. Historical Manuscript Indexing for user-controlled search

An additional challenge to cultural heritage mass-digitisation in the recent years, is the inaccessibility of the wealth of information conveyed by the texts captured in the digital images of historical handwritten documents. In particular manuscripts, which are among the most important witnesses to our European shared cultural heritage. Nearly one million manuscript books survived along with countless archival documents from a period stretching across more than a millennium, but digitising them is not enough, as they remain beyond reach of the large public. The HIMANIS consortium set the objective to develop new technologies to change the way the general public and scholars can access and exploit this Heritage, developing cost-effective solutions and tools for querying large sets of handwritten document images. Therefore, the consortium comprised four research partners from



HIMANIS search engine - Page of the Chancery Corpus - http://prhlt-kws.prhlt.upv.es/himanis/

three countries: France (Institut de Recherche et d'Histoire des Textes, and A2iA, a private company), Spain (Universitat Politècnica de València) and the Netherlands (Rijksuniversiteit Groningen). They used as a test bed, a challenging and particularly interesting case study, the large collection of registers produced by the French royal chancery (14th -15th c.), a corpus very well known as a whole, but a "terra incognita" in its interior. The proposed approaches were evaluated taking into account the data relevance and the user-feedback from different types of end-users.

Main outcomes

- **The creation of an unique collection for medieval studies** through the digitisation of the Chancery corpus, covering 200 years of royal administration and justice in France and Europe. This corpus encompasses 199 volumes, representing 83.000 pages, with 64.830 royal charters in 175 registers, and 24 formularies and related resources, freely accessible to the general public.
- **As part of the digitisation, the curatorial restoration of 32 volumes** of the corpus.
- **The development of novel technologies and cost-effective solutions** allowing for the first time to perform image analysis, layout segmentation, line identification, handwritten text recognition, for querying large sets of handwritten document images. The partners applied this artificial intelligence to the 83.000 pages.
- **The creation of a unique user-friendly interface** to access and query the CHANCERY corpus textual data, including crowdsourcing functionalities[25].

Pathways to Impact

This project brought a strong added-value to mass digitisation and preservation efforts of Cultural Heritage institutions, for the creation of their digital collections. No such large corpus of handwritten, medieval documents had been presented so far, whilst providing an ergonomic access to the general public. This was the result of a highly interdisciplinary collaboration associating Computer Sciences, Humanities and Culture Heritage institutions, in order to generate new, research-based knowledge. This collaboration had already and will have more impact on the creation of new knowledge and perceptions on medieval European history, which is erroneously seen as dark and brutal. By now, several PhD students already started using this corpus beyond the possible exploitation and analysis by HIMANIS partners. The European Library, involved in the project as Associated Partner, will contribute, by its strategic position, to showcase the technology to its wide network of members (48 national libraries in Europe), and promote the sustainable use, re-use and management of cultural heritage. The achieved technology will also bring direct economical benefits to the partners: since 2003, A2iA had developed a technology able to process only structured documents. The indexing

25 http://prhlt-kws.prhlt.upv.es/himanis/

technology developed and validated during the project will enrich A2iA's offer and will be commercially available to any public or private organisations holding historical documents. Moreover, the long lasting impact of the project was guaranteed, as the partners conceived two new projects based on the same technologies. The first one is HORAE, funded by the French National Research Agency, the second project is HOME – History of Medieval Europe, financed through the JPI-CH call for proposals "Digital Heritage". HIMANIS partners are also participating in larger scale infrastructures. They will transfer the expertise gained in HIMANIS as input to the READ and Transkribus infrastructures, and the FET Flagship Time Machine.

Short name: HIMANIS

Countries: France, the Netherlands, Spain

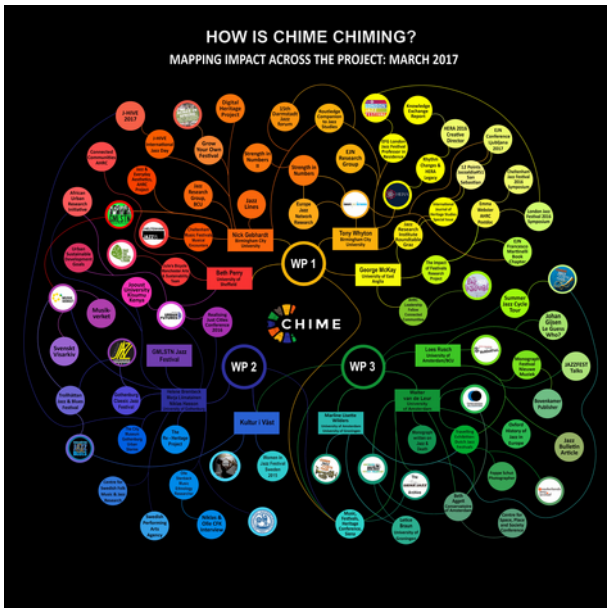
website: https://www.himanis.org/
Blog: https://himanis.hypotheses.org/

Funding awarded: € 390.869,00

Contact: dominique.stutzmann@irht.cnrs.fr

http://www.jpi-culturalheritage.eu/wp-content/uploads/HIMANIS1.pdf

2.3.2. Cultural Heritage and Improvised Music in European Festivals



CHIME - Impact map 2017 - http://chimeproject.eu/

CHIME explored the uses and re-uses of cultural heritage through the lens of jazz and improvised music festivals; the project's team examined what synergies and frictions were created when festivals and heritage sites interact, including the balance between conservation matters, heritage management, tradition, innovation, authenticity and identity. Therefore, national case studies in Sweden and in the Netherlands were contrasted with a pan-European examination of festivals, plus the development of a typology of festivals and heritage sites in Europe. Considering the impact of jazz as heritage and through heritage, the project demonstrated that cultural heritage was essentially important to festivals, and that there was no existing measures of the cultural synergies, audiences, and social and economic value of this crucial inter-relationship. They proposed to re-evaluate the position that festivals occupied in Europe's cultural ecology, while examining

boundaries between tangible, intangible and digital heritage, devising digital tools and cross-disciplinary methods, that would be of direct benefit to festivals, heritage managers and policy makers. The project's consortium included research teams from three countries – the Netherlands (University of Amsterdam), United Kingdom (Faculty of Arts, Design and Media, Birmingham City University) and Sweden (University of Gothenburg) – and an important number of Associated Partners from different backgrounds (museums, festivals, policy makers, European creative networks...), thus making sure that the range of outputs generated would have the potential to impact a multitude of users and communities.

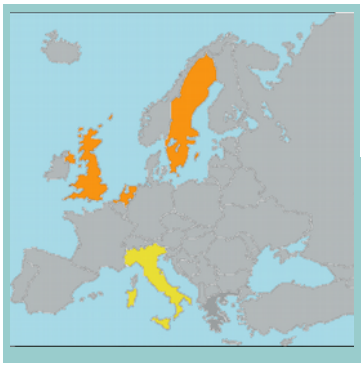
Main outcomes

- **A mapping study and typology of jazz festivals and heritage sites in Europe,** drawing on case studies from different European contexts, and exploring the history and development of festivals, from Southern Europe in the 1940s to their pan-European form today.
- **A toolkit addressed to heritage and festival managers,** accessible to a large audience: The Grow Your Own Festival initiative (GYOF). This toolkit was also developed into a CHIME App in 2016, revealing a lot of data about the mediation of festivals in digital space. This App is currently at the final stage of development for commercialisation.
- **The GYOF initiative led to the development of an annual one day festival event** in Birmingham, delivered in partnership with MAC Birmingham and the Surge Orchestra. This event will have a significant impact on the multi-cultural arts scene of Birmingham.
- **A Travelling Exhibition entitled** ***A History of Dutch Jazz Festivals in 30-some Objects*** produced in partnership with the Dutch Jazz Archive, disseminated at a range of national and international events, and available via a published booklet, downloadable from the project website.

Pathways to Impact

CHIME demonstrated ways in which heritage research could have a significant impact on the study of festivals, and vice versa. The high impact outcomes generated by the project benefited directly to the involved stakeholders, including policy makers, festival organisers, the broader heritage sector and the general public, and will continue to contribute, by this way, to broader societal roles of a smart, sustainable and inclusive Europe. The consortium will continue to work with its Associated Partners after the end of the project, including the Dutch Jazz Archive, Europe Jazz Network and MISTRA: For instance, the Europe Jazz Network already established a research group chaired by the CHIME partnership and involving members of the Dutch and English project teams. Potential synergies between UNESCO World Heritage Sites and the annual UNESCO International Jazz Day programme are also foreseen. Meanwhile, a series of high impact

academic outputs will continue to be published in the years following the end of the project: these include above all, a 5-volume Oxford History of Jazz in Europe, and a music festivals monograph series contracted with Routledge. In addition, the CHIME Project Leader has been appointed an Impact and Knowledge Exchange Fellow by the Humanities in the European Research Area (HERA), guaranteeing that his past activities within CHIME will feed into the development of this new role.



Short name: CHIME

Countries: UK, Sweden, the Netherlands

website: http://chimeproject.eu/

Funding awarded: € 581.282,00

Contact: tony.whyton@bcu.ac.uk

http://www.jpi-culturalheritage.eu/wp-content/uploads/CHIME1.pdf

2.3.3. Gastronomy and Creative Entrepreneurship in Rural Tourism

www.facebook.com/pg/gastrocert/posts/

The project GASTROCERT aimed to enhance our understanding of the vitally important role played by food in cultural identities, in particular how the development of local gastronomy can help to protect rural and cultural heritage values. Therefore, several comparative analysis studies were implemented by the consortium partners. The Scottish and Italian teams (University of the Highlands and Islands, University of Mid Sweden and University of Gothenburg) examined the different ways craft beer was positioned within touristic and heritage narratives. In parallel, the Scottish and Italian teams (University of the Highlands and Islands and Mediterranean University of Reggio Calabria) compared fishermen narratives on rural development. They were assisted by an additional Spanish team (University of Girona), in order to compare consumers' perspective on local food an tourism. The interdisciplinary partnership and good balance between northern European and Mediterranean research institutions offered contrasting yet complementary cultures, experiences, expertise and perspectives. The project focused more particularly on gastronomy tourism, and on the conditions creating and sustaining localised, traditional food productions, and how such production could support the development of rural areas.

Indeed, it is a recently new area of academic research, too often built upon industrial paradigms, with growth and profit as key components, while small scale food producers are often driven by passion, lifestyle choice, care of the local context and community. Hence, the consortium aimed to facilitate the successful future implementation of gastronomic initiatives.

Main outcomes

- **A transnational comparison of case studies,** offering a comprehensive overview encapsulating the interdisciplinary dimensions of the relationship of gastronomy and tourism, and allowing a better understanding of how cultural heritage can be used and re-used in sustainable ways.
- **A comprehensive literature review,** mapping the theoretical and empirical gastro-tourism terrain, and included in a peer-reviewed publication.
- **A toolkit addressed to SMEs, and other actors,** to communicate the importance of landscapes and traditions through 'narratives', create more effective and interactive media for educating and informing the local public, create better promotional materials, and successfully engage and contribute to regional gastronomy initiatives.
- **A 'Meta-mapping'/GIS** based on the historical, ecological-environmental and socio-economic evaluation of multilayer landscapes, bringing together different heritage dimensions, to be employed using computer and portable electronic devices.

Pathways to Impact

GASTROCERT fostered intra-sectoral and inter-sectoral exchanges, dissemination of results and knowledge transfer. The project contributed to the development of potential innovative solutions for sustainable management of rural areas in the future, and demonstrated how the scientific community could help developing long-lasting principles for sustainable transformation. Research results were disseminated in various targeted documentation to facilitate their uptake by policymakers, private actors, heritage managers, and other local actors. The consortium also contributed to the UNESCO Creative Cities Network meeting in 2016, which included representatives from nearly 80 cities worldwide, thus largely sharing its view that local-regional natural and cultural resources could be employed in the pursuit of vitalised and sustainable rural development. An important point highlighted by GASTROCERT has been that, to maximise the impact of such local initiatives, there was less need of increased funding, than to increase synergies between different EU, national and regional policies, as well as public and private investments. Thus, the toolkit and comparisons produced through the project will have a significant impact, showcasing best-practice. The findings of the projects are already planned to be used through a large number of parallel and follow-up initiatives: the Leader project Ruralscapes, or the HERA Foodscapes project, interrogating how alternative economic culture, food policies and local agricultural entrepreneurship, can help transform

public spaces into places of local economy and sociability which fit 21st century societies.

Short name: GASTROCERT

Countries: UK, Sweden, Spain, Italy

Funding awarded: € 552.418,00

Contact: annelie.sjolander-lindqvist@gu.se

http://www.jpi-culturalheritage.eu/wp-content/uploads/GASTROCERT2.pdf

2.3.4. The consequences of urban planning and governance reform for the historic built environment and intangible cultural heritage

PICH - Report: A Sustainable Future for the Historic Urban Core

The project PICH elaborated on the pilot work undertaken through the JPI-CH Pilot Call Project SHUC (Sustainable Historic Cores[26]). A large transdisciplinary consortium (urban planning, architecture, building conservation, urban design, urban policy, political science and governance, anthropology, real estate, geography and historical analysis) including 4 countries representing the principal models of urban planning in Europe – the Netherlands (Delft University), United kingdom (Newcastle University Global Urban Research Unit), Italy (Università IUAV di Venezia) and Norway (Norwegian University of Science and Technology) – and 10 Associated Partners, undertook research to improve knowledge about the impact of the reform of urban planning and of the governance changes on the tangible and intangible cultural heritage. Recognising that the form and quality of governance had a determining effect on the conservation of the built environment and the cultural heritage that it embodied, and that increasingly neoliberal urban policies seek to reduce the direct role of governments, due to new public engagements, austerity policies and responses to the climate change challenges, the consortium investigated the implications of theses reforms across Europe, mainly through 3 settings: 1) The general trends towards a broader governance involving more actors and more negotiation in decision-making; 2) In order to accommodate the interests of actors, the evolution of processes and 'ways of doing' heritage management towards more flexible or adaptable interpretation of law and regulations; 3) The increasing

26 http://www.jpi-culturalheritage.eu/wp-content/uploads/SHUC.pdf

emphasis on the historic environment 'performing' in economic terms, influencing policies and going sometimes against a more general sense of place.

Main outcomes

- **Twelve in-depth case studies conducted by the project teams in four countries**, and 4 comparative reports covering three settings: the built heritage of historic urban cores, former industrial areas and the urban landscape.
- **A web-based interactive education module,** addressed to academics, heritage managers and policy makers, where the approaches and findings are presented in a systematic and progressive way to aid learning.
- **A policy brief and practical guidances,** that will ensure that new approaches to urban planning enhance rather than undermine conservation of the built and intangible urban heritage.
- **A final project book summarising all the comparative reports and findings** of the project, for wide dissemination and in open access[27].

Pathways to Impact

The international comparison allowed by the PICH project was particularly relevant as its suggestions and lessons would not have been available in national/regional studies. Many aspects of planning highlighted by the consortium were often taken for granted within countries. The project payed particular attention in separating findings and lessons that were specific to particular countries (or regions) and those that were transferable and relevant to all countries and European cities with similar cultural heritage issues and programmes, ensuring that these findings would be of wide transferability. The main strength of this Heritage Plus project was to implement a well establish network of transdisciplinary researchers in Europe and beyond, with a PhD-degree in almost all of the partaking countries. The knowledge transfer allowed through this community of practice, will have a long lasting impact in terms of research – several applications have been submitted for a follow-up of the project's findings – and in terms of understanding of the impact of planning and cultural heritage on the "sense of place" and "place identity", in a general context of commodification of European heritage, being considered as beneficial to the city by means of branding, attracting tourism and investments.

Short name: PICH

Countries: UK, Norway, the Netherlands, Italy

website: planningandheritage.wordpress.com/pich-2/

Funding awarded: € 801.700,00

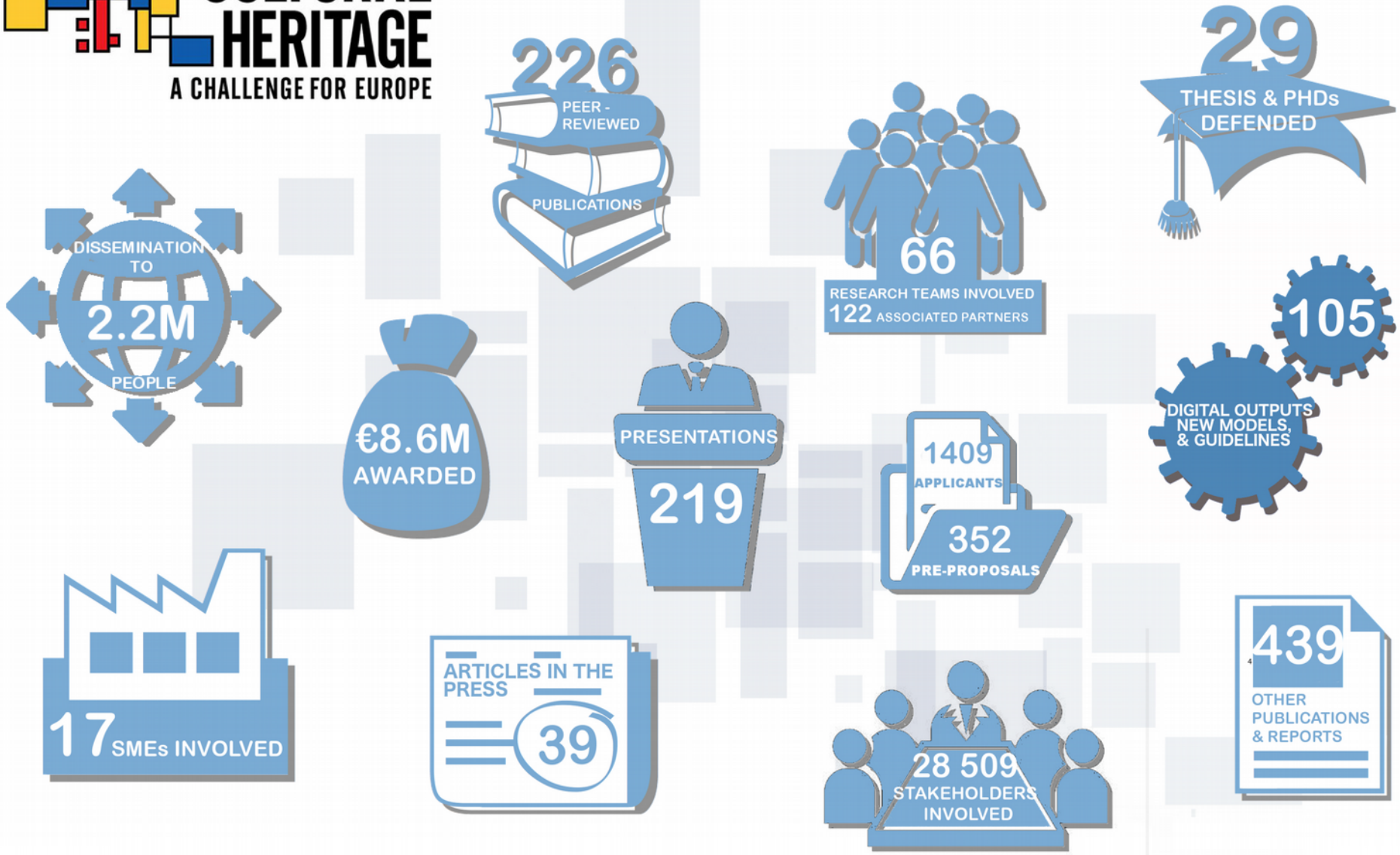
Contact: v.nadin@tudelft.nl

http://www.jpi-culturalheritage.eu/wp-content/uploads/PICH2.pdf

27 https://issuu.com/spatialplanning/docs/pich_final_report_-_060418

CULTURAL HERITAGE
A CHALLENGE FOR EUROPE

3.1. HERITAGE PLUS AT A GLANCE



3.2. Impact: key facts & figures

The following Section reviews in details key facts and figures about Heritage Plus Call for proposals, and the Heritage Plus research projects' impact. Therefore, it will use the different instruments and corresponding indicators, as described in Section 1 of the present report.

3.2.1. Call procedures

Heritage Plus call procedures were divided in two stages: Pre-call, with pre-proposals, and Full-call with full proposals. While Pre-proposals described the projects only in their general components, Full-proposals were supposed to delve deeper into relevant issues by providing more details regarding the Description of Work, the management structure and the budget. The first step of the Heritage Plus Call was launched on the 3rd March 2014, with deadline for the submission of the pre-proposal on the 28th April. A first eligibility check was effectuated between April, the 30th, and May, the 26th 2014, based on National Eligibility Criteria as reported in the Guidelines[28]. After evaluation of the remaining eligible pre-proposals, the Heritage Plus Management Group invited applicants from 61 pre-proposals to submit full-proposal to the second step by October the 22nd. 54 full proposals were finally submitted and evaluated by an International Peer Review Panel (IPRP) composed by 10 experts. The final ranking list was then presented to the Heritage Plus Management Group in Rome, the 18th and 19th March 2015, in order to be definitively approved. 16 projects were finally financed by the Management Group[29].

During the first step of Heritage Plus, considerable interest was shown to the Call, with 352 pre-proposals received. This number demonstrated the important impact of the Call dissemination to the research an academic communities in Europe, representing approximately a total of 1409 institutions, research organisations, laboratories, universities and other actors involved in Heritage Plus pre-proposals. The Project leaders of these proposals were coming, for a vast majority (76%) of them, from 5 countries: Italy, United Kingdom, Portugal, France and Spain, of which an overwhelming majority coming from Italy (48%). Figure 3 above shows the repartition of Project Leaders

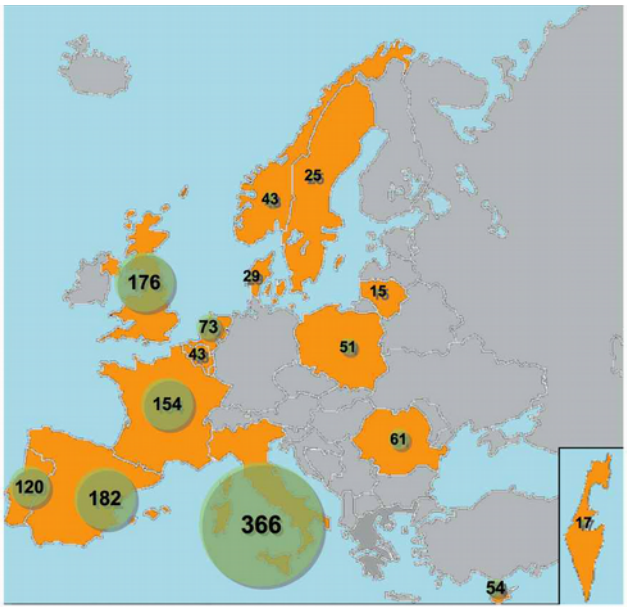


Figure 3: Heritage Plus - Origin of pre-proposals participants

28 http://www.jpi-culturalheritage.eu/wp-content/uploads/Heritage-Plus-Call-Full-Proposal-Guidelines-for-applicants.pdf

29 See details of the procedures in Heritage Plus Deliverables 3.1, 3.2 and 3.3

and Principal Investigators among the Heritage Plus participating countries, during the first step of the call.

An important number of these projects were eliminated after the first eligibility check, a bit more than 30% of the pre-proposals. As shown by the results of the MS10 survey[30], this high number cannot be explained by a lack of clarity of the guidelines for applicants, pre-proposals templates or national eligibility criteria. They were all rated as good by more than 70% of the respondents, and a large majority of them estimated that these procedures were of sufficient quality compared to their experiences in similar transnational calls. In addition, 75% of the respondents considered that the submission procedures were smooth and easy, and that the given period of time was sufficient. In contrast, only 27% of them estimated that the interactions with the national/regional agencies were constructive and effective, while 95% agreed on the very good quality of the interactions with the call secretariat. In conclusion, one can maybe explain the results of the eligibility check, by difficult interactions or a lack of preliminary interactions with the national/regional agencies, compounded by the important number of pre-proposals in some participating countries.

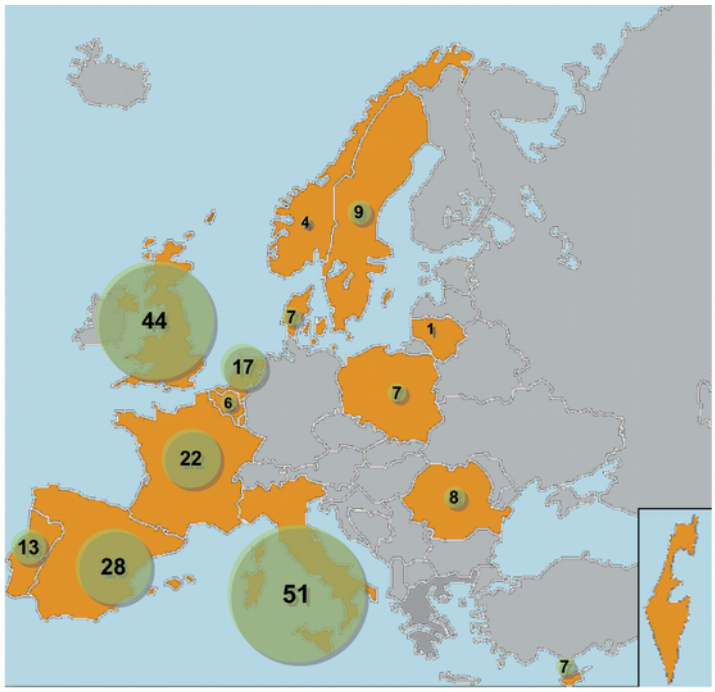


Figure 4: Heritage Plus - Origin of full-proposals participants

For the second step of the call, Italy remained at the first position for the number of research partners, and the Netherlands entered the top 5, as it is shown by figure 4 above. Second step participants included a vast majority (more than 70%) of universities and academic partners, a share that is even more important in the last selection of 16 projects, were almost 80% of the partners are from the academic sector (see figure 5 below).

3.2.2. Research projects

The final selection of research projects involved a total of 66 research partners from Heritage Plus countries. In addition, 122 Associated Partners were associated to the transnational research proposals through letters of commitment, and sometimes, further financial commitments. The share of partners from the University / academic sector was really important, but in most of the cases, the difference between Universities and research institutions was really subtle. 15 of the financed projects had a Project Leader

30 See Section 1.7 and Annex I

originating from the academic sector. This can maybe be explained by the fact, that universities are more likely to have the necessary means to answer and coordinate these type of transnational Calls for proposals. If the repartition of Projects Leaders and Principal Investigators between the different sectors wasn't really homogeneous, this fact was compensated by the very high diversity of Associated Partners, who included additional actors from NGOs, local and national authorities, libraries, archive services, archaeological sites, or national organisations and trusts (see figure 6 below).

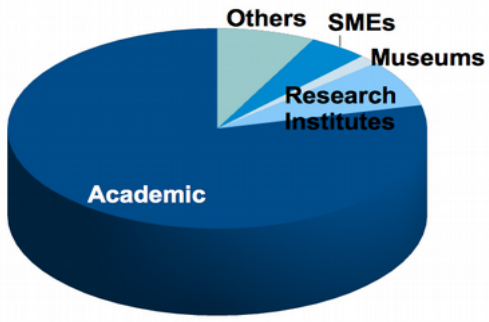


Figure 5: Heritage Plus - PLs & Pis fields of origin

According to results of the survey on the 16 projects financed[31], only 36% of the projects leaders had already participated to a similar transnational Call for proposals before their participation to Heritage Plus. Their experience was globally judged as positive, given that 90% of them would be willing to apply to another JPI-CH call in the future. For more than 80%, they agreed that the participation to this call speeded up the realisation of their project, and was far more interesting than applying to national or regional fundings. Compared to national and regional schemes, a majority agreed that the Heritage Plus project provided access to higher-quality additional expertise and/or facilities, and allowed to pursue more ambitious objectives, with a higher probability of success and much higher quality results. However, they didn't necessarily agree that Heritage Plus was more flexible and required less administrative efforts to manage. Regarding the Comparison with their participation in European framework programme funding schemes, opinions were more divided when comparing the probability of success of the projects, and 25% estimated that the objectives pursued were more ambitious with EU FP programmes. The rest of the respondents were undecided. To conclude, more than 60% of the participants estimated that Heritage Plus was the most appropriate funding mechanism for their particular project, however, for half of the respondents, this financial support was complementary to other funding instruments.

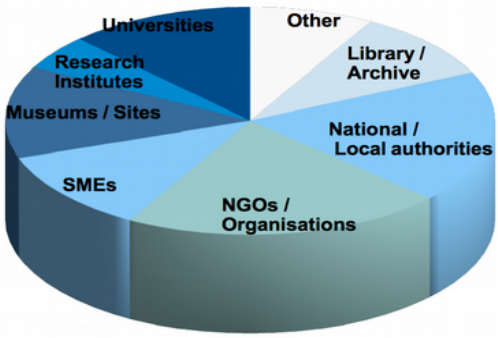


Figure 6: Heritage Plus - Projects' APs fields of origin

Within the research consortiums, Project Leaders considered that the factors which had the most important influence on the successful conduct of the projects were the commitment of main partners to the project, the creation of concrete cooperations with partners and Associated Partners, and their reliability in carrying tasks and sub-tasks. Delayed funding was also considered as having a strong influence on the project's success. For instance, an important problem with the Italian funders, which was solved

31 See Section 1.7 and Annex I

during the last phase of the impacted projects, affected an important number of Italian research partners and their collaborators, causing important delays in the successful conduct of the projects' Work Plans. The Heritage Plus Management Group, as well as the Heritage Plus research projects, had to implement, with success, specific coping measures to remedy to this unanticipated obstacle. By contrast to this factor, the instability of consortiums, number of participants, varying competence levels, cultural and methodological differences, and the global level of available resources were not seen as major challenges and obstacles to the successful conduct of the projects.

3.2.3. Stakeholders involvement

The monitoring performed by Heritage Plus WP4 Task 4.1, allowed to count the number of stakeholders involved in different project's activities. For each of its annual reports (Deliverables 4.1, 4.2, 4.3[32]) and for the projects' final reports, Project Leaders were invited to report in tables the activities involving stakeholders, while indicating the type of activity, the categories of stakeholders reached by the activity, and their number. Projects were also invited to share a brief description of each activity as well as to indicate its outcomes. Four categories of stakeholders were defined by the JHEP and JHEP2 methodologies for monitoring and evaluation of JPI-CH activities[33], and were kept for practical reasons, in order to avoid the multiplication of different categories based on project's responses. The four categories were the following: A. Policy makers and influencers; B. Cultural Heritage research community; C. Parallel international projects/organisations; D. Industry, SMEs and Civil Society. Projects were often confused between the different types of stakeholders, and mixed understandably the A and D categories, or the B and C, considering that some stakeholders from the Cultural heritage research community could also belong to parallel projects and organisations, and that policy makers and influencers could also belong to the civil society. Consequently, Task 4.1 identified a total number of 18.530 stakeholders involved in projects' activities.

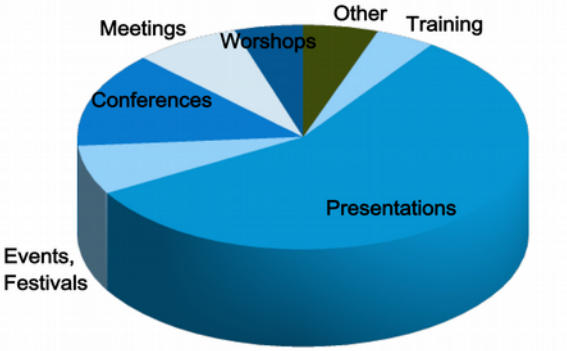


Figure 7: Heritage Plus - Stakeholders repartition by type of activity (including presentations)

In order to harmonise project's answers, Task 4.2 went through the different tables communicated by the projects, while distinguishing between the types of interactions involving stakeholders: the idea was to take mainly into account the active interactions, as opposed to more passively received dissemination, which was also reported by partners, counted and described by Task 4.2 in different tables. Indeed, the JPI-CH Scientific Committee estimated that there seemed to be an unclear understanding of participation /

32 See Section 1.1
33 See Section 1.4

stakeholders in general for most projects. For instance, Project Leaders made different choices regarding what to include or not in the stakeholders activities and in the dissemination activities: Some projects counted their project's presentations in the dissemination activities, some others considered it was a form of active involvement of stakeholders. Some projects considered the audience reached by their activities on internet as actively involved stakeholders, some counted these audiences in their dissemination activities.

As it was difficult to take a final decision, we decided to count all “dematerialised” activities – through internet or exhibition – as dissemination activities, and to include all “live presentations” as activities involving direct stakeholders. We also proceeded to additional minor adjustments, resulting to the number of 28.509 stakeholders reached by projects' activities, mainly through 7 different kind of engagements: 1. Workshops and equivalent engagements; 2. meetings with stakeholders; 3. Conferences directly organised by the projects; 4. Publics events, and festivals; 5. Project's presentations at seminars and conferences; 6. Training activities, 7. Others (see figure 7 above). It is important to notice, that almost 60% of the stakeholders were reached through project's presentations. If we want to suppress stakeholders reached by project's presentations from this list, the result obtained is 12.239 (see figure 8). Thus, it is interesting, beside the quantitative indication, to have an idea of the nature of the involvement, which may be quite intensive with small groups (for instance workshops) or rather large-scale and less intensive.

Figure 8: Heritage Plus – Stakeholders repartition by type of activity (without presentations)

In addition, for certain stakeholder activities, several projects did not distinguish the outreach between the stakeholder categories, resulting in partially combined categories (A/B, A/B/D, B/C...). All projects involved stakeholders and the vast majority of projects (12 out of 16) reached out to all four stakeholder categories, but to have an idea of the repartition between the different categories, it was decided, when 2 or more categories were combined, to divide the indicated number of stakeholders, and to distribute it equally between the combined categories. The results were included in figure 9, and show a logical over-representation of the B category (Cultural Heritage research community). The D category (Industry, SMEs and Civil Society), is also very well represented, with more than 30% of the reached stakeholders.

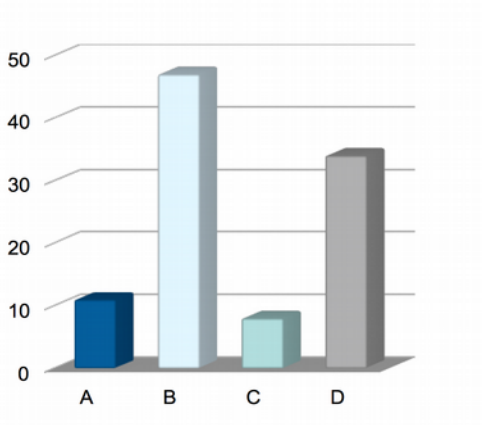


Figure 9: Heritage Plus - Stakeholders repartition by category (%)

3.2.4. Economic benefits and market

One of the main objectives of the Heritage Plus was to generate new and exciting knowledge exchange opportunities, foster entrepreneurial talent, and stimulate innovation, while improving the competitiveness, productivity, and performance of businesses and commercial enterprises. 45% of the MS10 survey[34] respondents estimated that their impact on this particular aspect was high or very high. As shown in the paragraph above, more than 30% of the stakeholders outreach activities were addressed to industries, SMEs, and the civil society. This has been a very important component of Heritage Plus transnational research projects. Even if this was not automatically reflected by the number of partners from the private sector represented in the project's Principal Investigators (only 3), in addition, 7 of the 16 financed projects included SMEs in their Associated Partners. For some of the projects, the creation of specific products addressed to the market was included in their initial objectives, but it resulted in concrete business opportunities for only 18% of the MS10 survey respondents. The expected economic benefits of Heritage Plus projects can be distributed into three different approaches.

First, some projects directly targeted the production of tools, technologies and methodologies addressed to the private sector in their initial plan, with strong market potential. This was, as an example, the case for the projects HIMANIS, whose achieved results will allow one of its partners – A2iA – to put a new technology on the market. This was also the case for the projects CHT2, or the project CLIMA, both of which created new Cultural Heritage applications addressed to the market. For these projects, the JPI-CH Scientific Committee suggested in its reviews to even more anchor findings and results, and make more efforts to approach the market. Business and exploitation plans, which are however confidential, were developed by projects such as HIMANIS, CHT2 or CLIMA (as planed in their initial Description of Work) and one confidentially even shared afterwards its business plan.

Then, some projects created, through their research activities, cost-efficiency solutions and procedures, with direct potential economical impact on their field of investigation. This was the case for the project CHANGES, who published its final report on cost-efficiency and economic effects of Planned Preventive Conservation, as an open access publication, or CHIME, which model for the effective creation of music festivals will have strong potential economical impact on interested partners. The project CMOP, by developing valuable guidances, low risk options for conservation treatment, enhanced tools and methodologies for conservators and collections care professionals, will also bring economical benefits to the sector, allowing the implementation of cost-effective solution, and potentially bringing to the market new and improved paints. Moreover, the projects CHANGES and GASTROCERT demonstrated that in order to reach a better economical impact, rather than a need for more funding, there was more a need for guidances and best practices for a better use of this funding.

Finally, some projects were deeply implemented in their territory, and had strong

34 See Section 1.7 and Annex I

local repercussions on the whole “ecosystem”: SMEs, touristic entrepreneurs, policy makers and heritage managers, local businesses, farmers etc. They were successful in putting cultural heritage at the centre of projects involving all local stakeholders and aiming at rethinking and reshaping the whole economical logic of the territory, with long and stable consequences and benefits. This is particularly the case for the REFIT project, which used oppida as a focal point to rethink the relations between all local stakeholders. This was also the case for the project EUWATHER, which involved all stakeholders in the revalorisation of a neglected aspect of their local cultural heritage, the canals and minor waterways. The project GASTROCERT achieved similar goals with gastronomy.

The projects had also positive economic impact on their own organisations and research institutions. The MS10 survey showed that for 75% of the respondents, Heritage Plus had a strong impact on budget and Research & Development expenses, and resulted in an increase of Research & Development personnels for 60% of them. For more than 80% of them, Heritage Plus results will also be used to feed R&D efforts in the near future. For a smaller part of them, the participation to the Heritage Plus call for proposals even allowed some non-permanent personnels to get a permanent position in their institutions or in another partner institution. As an example, thanks to the CMOP project, a senior researcher was recruited by the RCE, and the Tate Museum offered a permanent position to a post-doc researcher.

3.2.5. Publications

The number of publications has largely gone beyond the expected projects' results (see figure 10 below). Heritage Plus Task 4.1 listed a total of 420 publications at the end of the projects, of which 238 were peer-reviewed publications, and 182 “other” scientific publications. More than half of these publications were in open-access, as it was reported in Deliverable 4.3. These numbers have been reviewed and upgraded through Heritage Plus Task 4.2, comparing the tables and the individual written reports provided by the project leaders, resulting in a slightly similar total of 226 peer-reviewed publications, and 258 additional publications. To these additional publications, it also possible to add a total of 181 reports, deliverables and working papers produced by the research partners. All in one, this gives the impressive number of 665 different publications, which are addressed to researchers, general public, policy makers, heritage managers, curators or entrepreneurs, and having a potential impact on research and advancement of knowledge.

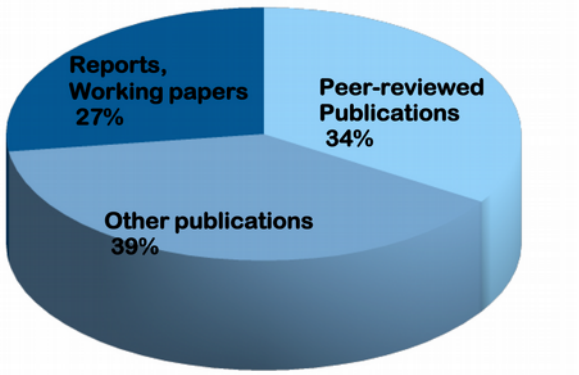


Figure 10: Heritage Plus - Publications by type of support (%)

However, these different categories of publications encompass contrasted realities, with different implications regarding the impact

of these publications on the research community and other stakeholders. On one hand, to start with peer-reviewed publications, these include contributions to conferences proceedings, publications in high impact journals, publications in university journals, short papers, and even sometimes, long term contributions to collections. Some of these peer-reviewed publications (a limited number) are not translated in english, limiting considerably their impact on the European research community. On the other hand, the second category of publications, “other” scientific publications, varies from books, or complete collections of books, to very short conference papers and articles on internet. It can also include reports that were not initially planed in the projects' objectives. A large share of these publications is not translated in english, even if the majority is still available in english. Some of these publications are also targeting very specific groups of stakeholders and local actors (guidelines, policy briefs, exploitation plans) and the question of their translation in english is sometimes less relevant. Regarding the last category, reports and working papers, they mainly include deliverables and publications that were planned in the initial projects' Description of Work. However, even if an important part of these deliverables were produced, they are, for a vast majority, not freely accessible and remain for private dissemination and use among projects' partners.

3.2.6. Other research outputs

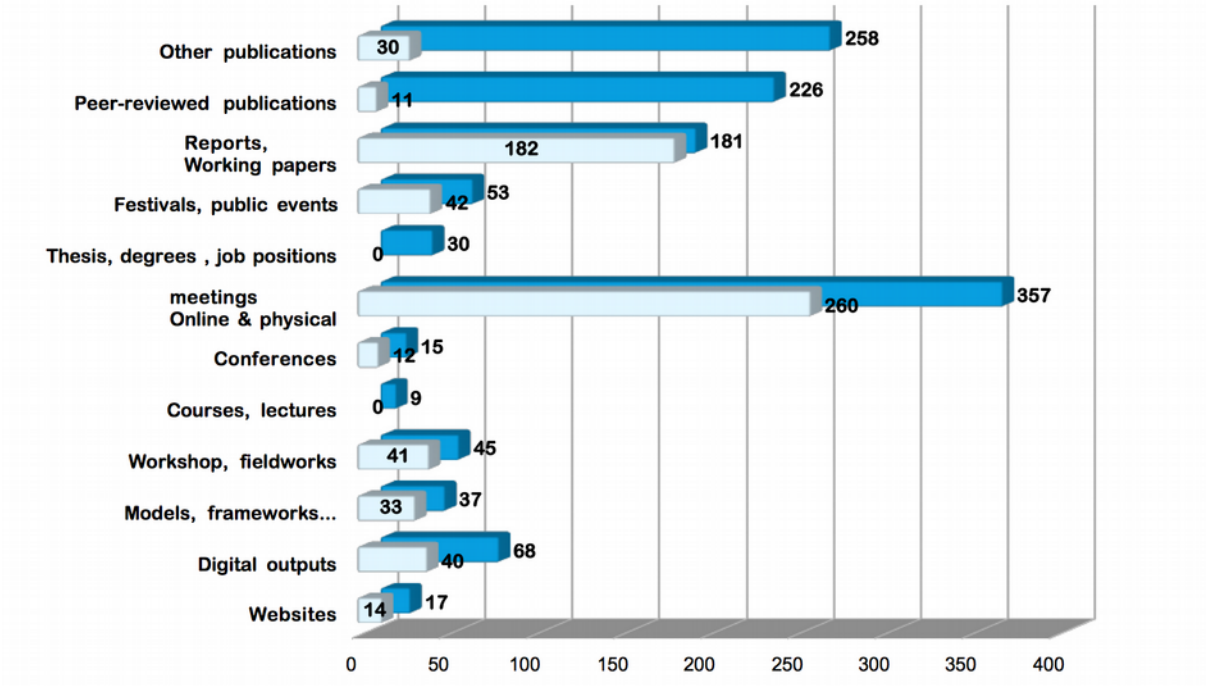


Figure 11: Heritage Plus - Comparison between projects "due" outputs in their initial Description of Work (in light blue) and the outputs finally produced

As it was the case for publications, the amount of different outputs produced by the projects is far more important than what was planned in the initial projects' Descriptions of Work. To give an idea of this volume, Heritage Plus Task 4.1 identified in Deliverable 4.3 a total of 237 other scientific outputs, but they cover really different realities and forms, from

training instruments, to databases, softwares, thesis defended etc. In its turn, Heritage Plus Task 4.2 identified a total volume of 856 scientifically relevant outputs (including also meetings, that were not counted by Task 4.1), in addition to publications reported above. To give a better idea of the diversity of this volume of outputs, these were classified between the following categories: websites, digital outputs, festivals, models, frameworks and guidelines, workshops, fieldworks, courses, lectures, case studies, conferences, symposiums, meetings (online and physical), thesis, master degrees, job positions, interviews/questionnaires/surveys, public events, exhibitions, dissemination materials, literature reviews and press releases. These categories were chosen according to the outputs identified in the projects' initial Descriptions of Work as well as the outputs reported in their individual periodic reports. The amount of outputs due by the projects was finally compared to the amount effectively done. Figure 11 above gives an idea, for some selected categories of outputs (including publications), about the quantity of outputs effectively produced by the Heritage Plus transnational research projects. Only outputs identified clearly in the initial projects' Descriptions of Work were counted in the “due” outputs. Sometimes, projects just vaguely mentioned the production of “some publications” or “some fieldworks”. In these cases, the outputs were not counted as “due outputs”. This is why in figure 11 above, the number of peer-reviewed and other publications effectively done by projects appear significantly higher, as many projects didn't specify the exact number in the initial Description of Work.

Regarding meetings, these mainly cover internal meetings. The total number of meetings communicated by Deliverable 4.3 (327) was somewhat updated by Task 4.2, adding some meetings mentioned in the projects' reports (especially in the stakeholders involvement tables), or removing some others that were not really “internal”, resulting in a total of 357 internal meetings, of which at least 37% were physical meetings (see figure 12). Heritage Plus demonstrated the increasingly widespread usage of virtual meetings and videoconferences, that these were working very well and were a good way to decrease travel costs as well as to allow more frequent interactions and ensure that all partners could be present.

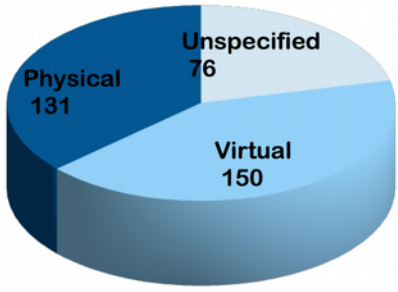


Figure 12: Heritage Plus - Number and type of meetings

One can also notice that Heritage Plus projects' general trend was to follow their initial Description of Work. As it was already mentioned in Deliverable 4.3, of the sixteen projects, thirteen fully achieved their objectives, and the others only encountered minor deviations, which was a good performance given the obstacles and difficulties faced by a number of these projects (topics more complex than expected, personnel and internal re-organisations, difficulty of national call handling procedures and delays in receiving national funding, especially the Italian funding problem). As a final remark, beside these outputs, a certain number of outcomes were really difficult to quantify, even if they are directly attributable to Heritage Plus research projects. For instance, this was the case for the “access to new know how” for the research institutions and partners. More than 90% of

the survey respondents estimated that their participation to the Heritage Plus resulted in access to new know-how for their institutions, through the development of additional competences, the adapting of new technical disciplines to cultural heritage research (satellite technologies), and a better understanding of issues and research landscapes where these research partners are active.

3.2.7. Dissemination

Dissemination numbers given by Deliverable 4.3 were not updated by task 4.2. As these number were already considerably high, an update of these number would have leaded to very cosmetic changes. According to the reporting performed through Heritage Plus Task 4.1, the knowledge transfer and dissemination activities of the Heritage Plus projects have reached more than 2.2 million people, taking into account that sometimes, projects claimed a reach of audiences without quantifying these, which implies that the impact of these dissemination activities may have been even higher. In addition, as we already underlined previously in this report, there was sometimes confusion for projects leaders between activities related to dissemination and activities related to stakeholders involvement.

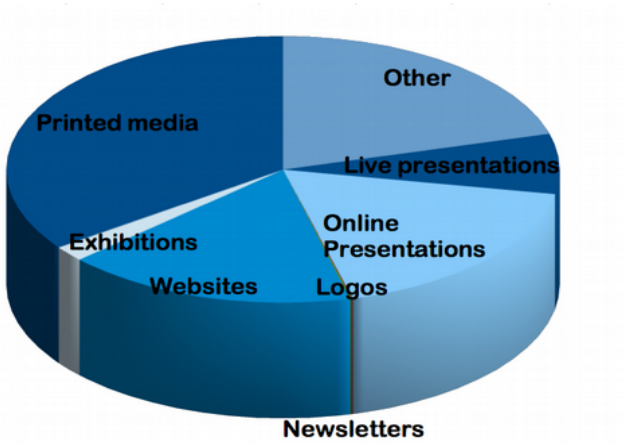


Figure 13: Heritage Plus - Share of audience reached by dissemination media

The predefined templates and categories available for the reporting of dissemination activities were: appearance in printed media, exhibitions, websites, logos, newsletters, online presentations, live presentations and others. “Others” included very diverse and specific forms of dissemination used by research projects, such as the project CHIME, which disseminated its research results in music festivals. As a result, the “others” category appears as the second most important category (see figure 13 above). It is also interesting to notice that researchers still quoted “printed medias” as the most considerable way of dissemination, while the impact on audiences of the online presentations and websites is somehow underestimated in their individual reports. Regarding the impact of newsletters, this impact is almost considered as non-existent.

3.2.8. Projects' sustainability

Sustainability raises three important notes of concern: how will the research results of these projects be used after their end, what will happen of Heritage Plus projects' partnerships and consortia, and how to keep the tools and digital platforms developed after

the projects have ended. These three questions are the backbone of Heritage Plus projects' sustainability plans after the end of the financing programme, and the guarantee of a long lasting impact. One of the Heritage Plus call initial objectives was to maximise the value of research outcomes by promoting their transfer to individuals and organisations outside the immediate research community, and, where appropriated, to facilitate the knowledge transfer of those outcomes to both the research community and society where they would make a difference. This transfer already started during the projects, but the most important part of it will happen later. As we already underlined it previously in this report, too little time has passed since the majority of projects ended, so that it is really difficult to assess the impact of this knowledge transfer, and its potential sustainability in time.

Regarding the use of Heritage Plus projects' results, for more than 80% of the Project Leaders answering to the survey, these results will be used by some other participants belonging to the research consortium in the future. In addition, all of them estimated that these results would be used by Associated Partners in the project consortium after the end of their project, and half of them estimated that organisations and institutions not initially involved in the projects' consortia would uptake these results. In addition, for 7 Project Leaders, these results will be used to build new transnational projects. However, some of these results, outputs and outcomes are still to be produced after the official end of the projects. Many publications are still to come: these include, for instance, the publication of the IJHS special issue, a jazz imaginary monograph and the first volume of the 5-volume Oxford History of Jazz in Europe by the project CHIME. The project CMOP planned to publish its final conference proceedings in 2019, by Springer Publishing and EUROMAGIC will also publish a volume based on its final conference contributions. This is also the case for the project PROTHEGO, intending to publish a paper about the project's results (e.g. "Multi-scale methodology for GeO - hazards assessment in Cultural Heritage. The Alhambra test case.") or the project REFIT, which final project monograph hasn't been issued yet. Moreover, some projects meetings, workshops or events are still to come: the project CMOP planned, for example, to present the project at the SBMK summit in Amsterdam, in November 2018, and many other meetings have been organised since the end of the project, which are not reported in the Task 4.1 reports. The Grow Your Own Festival initiative, implemented by the project CHIME, will also result in an annual Festival event in Birmingham, ensuring long term sustainability of the project's results[35].

To the question, will the project continue after the participation to the Heritage Plus call for proposals and what will happen to these projects, all respondents to the MS10 survey[36] answered that, in one way or another, their projects would continue, with an in-house project in their own institution (34%), with projects in another institution (9%), and by other means for more than half of them: this included projects with a larger consortium (CHANGES), projects with only one smaller part of the consortium (GASTROCERT),

35 See Section 2.3.2

36 See Section 1.7 and Annex I

projects with a completely different consortium (CLIMA), or projects securing funding to continue very specific aspects of the programme (CHIME). As an example, in December 2017, the members of the research team Antwerp from the EUROMAGIC project, were attributed 3.7 million Euros for a research project on the history of the magic lantern as a mass medium in Belgium. Partners of the GASTROCERT project split in many different initiatives and applications; the project RURALSCAPES, an application Friluftsliv, slow adventure and society, submitted to the Norwegian Research Council, or the HERA proposal Foodscapes: rural and urban networks which passed the first stage. The HIMANIS projects resulted also in two new projects based on the same technology: the first one is HORAE, funded by the French National Research Agency; the second project is HOME – History of Medieval Europe, financed by the JPI-CH Digital Heritage Call for proposals.

Finally, to the question how to keep the tools and digital platforms developed alive after the projects have ended, not all projects achieved long lasting solutions. Some projects secured fundings, and implemented specific exploitation plans for the future functioning of their platforms and tools. This is the case for the project CHIME, who applied for follow on funding via the Arts and Humanities Research Council (AHRC) in order to develop the CHIME app for widespread use. Likewise, the HERITAMUS consortium decided to contract a computer company that granted a year of technical support after the project end date, in order to organise the follow-up and future sustainability of its platform, and so did the PROTHEGO project with its website, which will continue to be updated and maintained up to 2 years from the end of the project. To give two last examples, the REFIT project website will continue to be augmented by further material relating to their ongoing work after the end of the project, and the project EUWATHER, which ended in August 2017, and generated the web platform “Waterways Explorer”[37], has seen its platform continuing to be used, with new content and new itineraries added regularly. Finally, several projects implemented new partnership to secure the future of their platforms, as did the project CLIMA, through a partnership with the Superintendence of Archeology of the metropolitan area of Rome, the province of Viterbo and the Southern Etruria, for the use of the CLIMA Platform in other sites of Lazio (Vulci, Tuscolo, etc.). For other projects, such as the project ENDOW, the future of their platform is more problematic. In spite of an exploitation plan, the ENDOW platform for diligent search, which holds great potential and demonstrates significant reduction of the costs of right clearance for Cultural Institutions, may stop functioning after one year[38].

3.2.9. Relation to JPI-CH strategic research agenda and Heritage Plus topics

To the question how would you describe your project's impact on each of the following Heritage-Plus transnational call research topics after the end of the project,

37 www.waterwaysexplorer.org
38 See Section 2.2.4.

MS10 survey respondents[39] answered for a bit more than 30% of them, that they experienced more impact than expected. 60% estimated that their impact was as estimated, and 9% that their impact was less important than expected. As it is described in part 2 of the present D4.4 report, all projects largely contributed to the three Heritage Plus research topics: 1. Safeguarding tangible cultural heritage and its associated intangible expressions; 2. Sustainable strategies for protecting and managing cultural heritage; 3. Use and re-use of all kinds of cultural heritage.

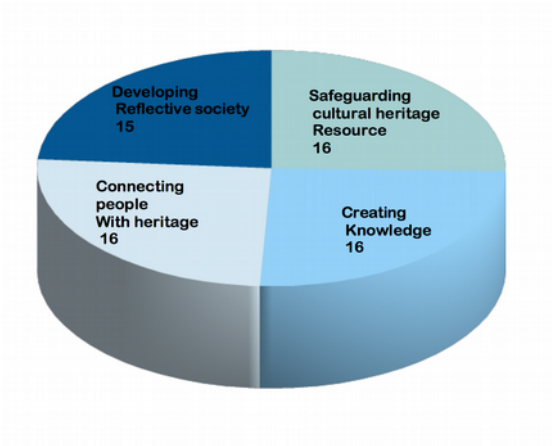


Figure 14: Heritage Plus- Number of projects contributing to each of the SRA priorities

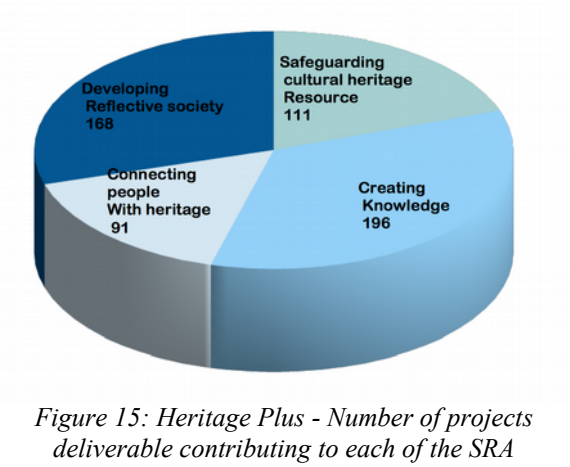


Figure 15: Heritage Plus - Number of projects deliverable contributing to each of the SRA priorities

These 3 topics were drawn from the JPI-CH Strategic research Agenda (SRA) published in 2014[40] and all projects contributed indirectly to the four SRA priorities which are: 1. Developing Reflective society; 2. Connecting people with heritage; 3. Creating knowledge; 4. Safeguarding cultural heritage resource. Indeed, all projects' leaders were required to specify their contribution to the JPI-CH main SRA challenges in their progress reports, by stating which of the projects' deliverables contributed and how. Results are shown in figures 14 and 15 above. Much more interesting are the narratives behind each project's contribution to the SRA challenges, showing how these challenges were understood and implemented concretely by Heritage Plus projects.

Regarding the first challenge, **Developing a reflective society**, projects considered in a vast majority, that the involvement of associated partners, the development of partnerships and collaborations with key stakeholders as well as the dissemination to the general public were the main instruments to answer to this challenge, in particular through a deep involvement of these stakeholders in research activities, in workshops and in internal meetings. Conferences oriented to the general public, participatory approaches, but also publications and articles contributed to the promotion of the projects and to the construction of a reflective society. “Reflective” was understood, in its first sense, to challenge people's views of heritage and reach a better understanding from societies at large, as well as of the strong connection between past and modern times, of the agents of change to Cultural Heritage, and at drawing attention to the challenges and threats faced

39 See Section 1.7 and Annex I
40 http://www.jpi-culturalheritage.eu/wp-content/uploads/SRA-2014-06.pdf

by the preservation of cultural heritage in Europe. In it's second sense, “reflecting” was interpreted as a better understanding of why people care about cultural values and heritage, and what are the different values cultural heritage holds for these people and stakeholders. Most important, it also included the description of how general public and other stakeholders are fundamental contributors to the construction of cultural heritage. Thus, Heritage Plus projects such as REFIT, GASTROCERT, EUWATHER or PICH, contributed largely to a better understanding of historical, cultural, social and economic dimensions of heritage management, adopting holistic approaches and increasing knowledge regarding the significance of individually and collectively held cultural, social and economic heritage values. They assisted local and regional communities in the development of solutions to resource management that were demonstrated to be efficient and sustainable, and in the assessment of the impact of cultural heritage on the way they perceive the “sense of place”. The last sense of “reflection” raised by the different projects, was also to question the work of local governments, other agencies and NGOs in heritage management and planning, by encouraging debates and reflection on management of landscape and heritage, highlighting the significance of research findings for practice.

Heritage Plus projects met the second SRA challenge of **Connecting people with heritage** in different ways. Firstly, they fostered virtual and digital connection of people to their past and cultural heritage, by the development of specific tools, digital resources, by involving them and disseminating projects results through mass media and social media. Projects encouraged the development of tools addressed to non-professionals, in order to actively connect people to their heritage. For instance, CHT2 and HEURIGHT14 created interactive online platforms and models intended to connect people with forgotten or lost cultural heritage, and allowing a better understanding of cultural sites by non-experts. Secondly, Projects contributed to people's connection with heritage, by facilitating the physical or virtual access to this heritage. To give an example, the REFIT project created digital guides to ensure public engagement and access with the oppida landscapes remotely and physically. Some other projects, such as GASTROCERT, contributed to sustainable and respectful touristic development, preserving the integrity and authenticity of heritage as a touristic resource, while guaranteeing its sustainable access to the majority of people. The CMOP project also contributed to secure this public access to heritage, developing innovative solution for the preservation of paintings, and allowing their public display in a sustainable manner. Public engagement events, field-works, public lectures, were also ways used by projects to physically re-connect people to their heritage, while fostering creative re-uses of this heritage, for instance in the project EUROMAGIC. Sometimes, projects went even further, offering to people an active role in the preservation of cultural heritage, as with the projects ENDOW and HERITAMUS.

Heritage Plus transnational projects also contributed to **Creating knowledge** by increasing the quantity of available knowledge in specific research areas, and by improving the quality of this knowledge in under-investigated areas, making it easily available and accessible to researchers and to the general public. Alongside with traditional academic output – such as monographs, journal articles, conference

presentations, books, documentaries, exhibitions – the amount of archaeological and environmental data collected within projects such as CLIMA, of new ethnographic data within projects such as HERITAMUS, or of literature reviews providing state of the art of the current knowledge in specific fields, represent an important tool of knowledge, most of the time freely accessible on the web. Knowledge was also generated through transnational comparisons. Generally, projects implemented at national scale don't have similar critical mass, relevant stakeholders as well as associated partners networks to produce such meaningful comparisons. Comparison was, as an example, at the heart of the GASTROCERT project, aiming, through national end regional comparisons, to increase the knowledge of heritage resources and assets and understand how these can be sustainably exploited and support rural development. This was also the case, amongst others, for the projects PICH, REFIT, CHANGES and EUWATHER. These comparisons helped in finding innovative approaches facilitating the safeguarding of cultural heritage, and forming the basis for future research projects. Likewise, these comparisons shaped solid bases to inform decisions, policies and intervention plans around cultural heritage, and provide a critical analysis on how EU laws and policies can be improved, such as with the project HEURIGHT14.

The last challenge, **safeguarding our cultural heritage resource**, was also addressed in very contrasted ways by Heritage Plus research projects. While some projects, such as EUWATHER used sustainable ecotourism to safeguard and promote neglected pieces of heritage – canals, waterways and waterscapes – other projects studied the negative impact of tourism on cultural heritage sites preservation. The project GASTROCERT, as an example, assessed which were the limits of using tourism and gastronomy as an instrument for rural development, and the dynamic relation and fragile balance between tourism and cultural heritage integrity. Several projects, such as CHT2, ENDOW or HIMANIS aimed to safeguard cultural heritage resources through digitalisation projects, making them accessible in sustainable ways to researchers and to the general public. Likewise, projects such as CHANGES or PICH, defined strategies for conservation and valorisation, drafted and circulated policy briefs addressed to policy makers and heritage managers, and performed case studies and comparison reports playing a huge role in advising policy makers as well as heritage managers and civil society. Tools were also produced by projects such as PROTHEGO, CHT2, or CLIMA, in order to support the Cultural Heritage communities in their daily safeguarding work. Finally, enhancing knowledge and informing the general public about the threats to the preservation of Cultural Heritage was also perceived as an efficient way to protect and safeguard heritage, forcing the local authorities to take rapid actions. For instance, the project CMOP, besides contributing to define the most effective measures that would reduce the risk of artwork degradations, highlighted and alerted simultaneously policy makers about the negative impact of environmental pollution on the safeguard of cultural artefacts.

4. Final recommendations

4.1. Call procedures

As it was described previously in Section 3.2.1, the very important number of pre-proposals received by the Heritage Plus Call for proposals (352 pre-proposals) was a first positive indication of its impact on the research community. This was emphasised by the diversity and large scope of the research topics financed through the call. Unfortunately, this large number of pre-proposals was compensated by an important failure rate during the eligibility check. If we add to that, the fact that 80% of the project leaders were coming from only 5 participating countries, the technical and administrative burden for some national agencies may have been unpredictably important. The survey shows that projects participants were generally more satisfied regarding their interaction with the call secretariat than with their national agencies and funders. In addition, many ineligible proposals were coordinated by researchers originating from countries who already faced a very important demand, exacerbating the fact that some participating countries may have been caught unprepared to cope with this unexpected number of proposals, preventing them to have sufficient exchanges with the Projects Leaders.

This results in two main recommendations for future calls for proposals: It could be necessary, for future calls, and this has already been experimented successfully in the JPI-CH Call Digital heritage launched in 2017, to sharpen the focus of the call's topics, in order to better target and be more able to face the potential number of proposals, and indirectly to reduce the number of ineligible proposals. Then, participating national agencies should secure sufficient means to face the technical and administrative capacity required by their participation in the call, as the transnational nature of the call and the Europe-wide dissemination may result in an unexpected number of applications. National agencies must be aware that their role is not only reduced to a promotional role to their national researchers, but also to provide sufficient technical follow-up and support to guarantee the eligibility and success of their proposals.

4.2. Research projects

The JPI-CH Scientific Committee highlighted several times the overly holistic nature of transnational research projects financed through the Heritage Plus call. They agreed that this complicated sometimes the process of reaching results. This holistic nature was somehow imposed by the size of the call, the number of partners involved (including the European Commission), and the necessity to find a consensus regarding the prioritisation of the research topics. The main recommendations here would be the same as above, to sharpen a bit more the focus of the Call for proposals.

In addition, several Project Leaders estimated that they had to face too many

obligations and parameters during the research process, and that these parameters were sometimes distancing them from their initial research objectives: dissemination, stakeholders involvement, private sector involvement, monitoring and evaluation, reporting etc. Indeed, it appeared difficult for projects having already a really busy research agenda, to guarantee that all “success criteria” were met, and it seriously harmed the research process for some of them. Dissemination, communication, management required time, and these tasks were always undertaken by partners who were also part in the research activities, and in some cases couldn't commit enough time and efforts to reach satisfying results. To ease this process, one recommendations could be to further involve some Associated Partners in the initial proposals and assign them some of these specific tasks that are not directly part of the research process, but are essential parameter for the success of the research project as a whole. For instance, an Associated Partner could exclusively manage the question of the knowledge transfer to the industry and third sector, another could focus on results dissemination, another on monitoring, reporting and valorisation of results. Associated Partners could in their turn form specific hubs, to take over specific aspects of the projects' valorisation. Comparing with the current state of involvement of Associated Partners in Heritage Plus projects, this would give them more responsibilities, while facing in the same time the challenge of their concrete commitment to the projects. This would, however, also require that Associated Partners' work can be funded, which is currently impossible for some national funders.

4.3. Stakeholders involvement

Most of the projects present during the first JPI-CH international event in Brussels, the 20th and 21st February 2017, expressed their difficulty to measure the impact and effect of discussions that had been led with stakeholders within the framework of their research activities. However, they were all certain that these discussions had a concrete impact. In addition, even if one could measure this impact, this would remain a subjective statement, as it was often too soon, during the lifetime of the projects, to have objective indications of the long-lasting effect of these exchanges. Yet, some elements can still be improved in the monitoring and reporting process to have a better idea of how these exchanges with stakeholders may have a positive impact in the future.

The four stakeholders categories, based on the JPI-CH communication plan and imposed by the monitoring templates – A. Policy makers and influencers, B. Cultural Heritage research community, C. Parallel international projects/organisations, D. Industry, SMEs and Civil Society – should be more flexible and unambiguous. The possibility to add 3 or more categories should be examined (private sector, investors, students...). Projects often mixed between the different categories of stakeholders, and these categories failed to distinguish between activities involving the private sector, and activities involving the general public. The same applied to the C category, which was most of the time regrouping stakeholders from the 3 other categories.

Moreover, future monitoring should focus more on the qualitative nature of projects' activities with stakeholders. More than the quantity of stakeholders reached by the projects, the way these stakeholders were involved would be a much more useful indication to estimate the later impact of such activities. Going through the different activities reported by projects, stakeholder involvement activities seemed sometimes to target mainly data gathering rather than a more intensive interaction or even actual co-creation. In addition, projects often got confused between dissemination activities and stakeholders activities in their reporting templates. While dissemination involved sometimes stakeholders, but at a rather passive level, stakeholders activities implied a much more active participation. A solution for that would maybe be to limit the monitoring to very specific activities (workshops, meetings, fieldwork...), even though this would not reflect anymore the important diversity of activities performed by the projects.

The monitoring of stakeholders involvement activities revealed also an under-representation of the A category (policy makers and influencers) compared to the other categories of stakeholders. Projects acknowledged that it was even more difficult to have contact with policy makers than to have contact with the private sector or any other type of stakeholders. This was also highlighted several times by the Scientific Committee during both reviews[41]. In order to facilitate this process, several recommendations were formulated by the projects themselves, by the scientific committee members and by the JPI-CH partners. The first one was to clarify from the beginning in the proposals, the process foreseen to reach policy makers. Indeed, several projects planned to address policy makers, without clarifying why, how and which kind of policy makers, levels and domains they would like to target. The second one was to systematise the use of more concise outputs, policy briefs and other guidelines addressed to this very specific group of stakeholders. If the quantity and quality of interactions with stakeholders were good indicators of their later potential impact, the existence of such additional outputs and briefs could also be an essential prerequisite for the future uptake and consideration of the research results by stakeholders. The last recommendation was that the JPI-CH might consider playing an active role in bringing the results to high level policymakers, who are not always easily reached by researchers. Project participants estimated that the role of the JPI-CH was not only to fund and coordinate calls, but also to bring added-value to the funded research and results, contributing to their dissemination, facilitating their uptake by policy makers, and fostering the implementation of sustainable research networks. As a first step, during the last JPICH international event in Torino, it was proposed by the JPI-CH coordinator to contribute to this through joint policy brief publications.

Future calls and projects should also pay attention to further include certain stakeholders that were weakly involved in Heritage Plus projects' activities, in particular scholars and academics. One of the main connection between research and stakeholders is education and only very few projects raised this concern, while this is where the future decision makers might be reached for the first time. Several projects expressed through their reports that they were already shaping their future research landscape by involving

41 See Section 1.6

young students and researchers in their activities. One recommendation for the other projects would be to emphasise education and capacity building, which are the bridge between research and stakeholders. Within the limits of what national funding schemes allow, JPI-CH could also consider to direct special funds to “after activities” (after the end of the research projects) addressing directly capacity building, training and education.

4.4. Economic benefits and market

Transform research findings into market products and economical benefits was not a research priority for all Heritage Plus transnational research projects. Unanimously, Scientific Committee members and JPI-CH partners agreed that this shouldn't be the project's initial aim. That being said, when relevant, they recognised that projects should settle from the beginning the necessary conditions for a successful uptake of their research results after the end of their project, considering that added-value would not come until projects bring their outcomes to the market, clients and interested stakeholders. Consequently, as recommended previously, projects could therefore involve their Associated Partners more extensively, and why not create specific consortium with academics and SMEs, facilitating the uptake of results at the commercial level. The JPI-CH and funding partners could here again dedicate specific funding to this end, that would be awarded after the end of the project, based on concrete exploitation plans produced by the projects. For instance, in the project CLIMA, where several partners and stakeholders were interested in the uptake of results, consortium partners expressed the need for an intermediate funding instrument, to fil the gap between the closure of the project and the bringing to the market of the final products.

4.5. Publications

The number of publications reported by the Heritage Plus transnational research projects has been quite impressive, especially for the peer-reviewed publications, and gave a precious overview of what projects financed through JPI-CH calls for proposals could produce. However, this number of publications would need, in future calls, and for a better monitoring and evaluation, to be tempered and classified in a more precise way, since one can notice that the publications of a whole chapter, the publication of a book, the publication of a conference paper in proceedings, count for the same amount of publications. The number of publication was sometimes inflated, counting several publications in the same proceedings, while some other projects just counted these proceedings one time. In the end, these different ways of counting balanced between one another, but restrained the possibility to have an objective overview regarding their potential impact. Here also, the quantity of publication should be tempered by a more qualitative indicator: For instance, try to assess if the distribution of the chosen support is important or not, if the publication is in english, if the publication is influent or not in the

relevant research field etc. In addition, one of the main difficulties will be to measure these publications' impact after the end of the projects. If the quantity of publications produced by Heritage Plus projects gives an overview of their potential impact in the future, just one of these publication may later have much more impact that 50 others on the research community, and the JPI-CH is missing specific mechanisms to follow these publications long after the end of the projects (for instance mechanisms to follow-up citation indexes). This could maybe be one of the tasks assigned to the JPI-CH evaluation and monitoring team.

4.6. Other research outputs

Other outputs offer also a precious idea of the prolific nature of Heritage Plus projects in their production of research outputs. Scientific Committee members agreed during both reviews on the general high quality in scientific terms of the outputs and deliverables produced by the Heritage Plus projects. In addition, they estimated that these would have a huge impact amongst cultural heritage researchers, and that even more impact could be expected since a majority of the projects just finished their research. It is important to notice that project reported in their monitoring tables some categories of outputs that were impossible or very difficult to quantify, such as advancements in knowledge, knowledge transfers etc. In addition, specific outputs such as “new methodologies”, “new protocols”, would have needed to be discriminated from other outputs such as publications and meetings, and didn't deserve the same quantification system, raising here again the need for more qualitative indicators rather that quantitative ones. These are the reasons explaining why these outputs cover only the “visible part of the iceberg”, which is the very direct impact of research activities performed by Heritage Plus projects. The main impact is still to come and to be demonstrated, as it will not take place during the lifetime of the projects, but long after their conclusion. No indicators allows, for the moment, to measure this impact, and this is even worse regarding the indirect impact of projects. JPI-CH partners would need to define a systematic approach for the measure of this long term and indirect impacts.

Waiting for the implementation of such an approach, some recommendations could be formulated to improve the monitoring and follow-up of direct projects outputs. The first recommendations would be, as we already said previously, to discriminate some outputs from the others. As an example, the reporting exercise should offer the possibility to showcase 4 or 5 very representative outputs, explaining why these outputs are representative, and how they answer to the research objectives. This could be made in parallel with the lists and general quantification of outputs. Then, even the quantification of these outputs wasn't always easy and could be improved. They were sometimes discontinuities and repetitions between the different research projects' reports, giving the impression that projects leaders were confused about their own achievements in the consortium, and that the whole counting of outputs was never centralised. Future

monitoring should make sure that all these informations are collected upstream by projects leaders, and therefore communicate them the necessary templates with the required information from the beginning of the projects (ideally, research proposals should include these monitoring needs, at least for some specific outputs). Research proposals should also be improved from the beginning by including clear deliverables lists with Gantt chart, which was not always the case for some Heritage Plus funded projects, making the comparison between planed deliverables and done deliverable very difficult to monitor. Access to deliverables should also, in one way or another, be guaranteed to Heritage Plus monitoring team, or at least to the Scientific Committee expert performing the critical review of projects progresses, as intermediate projects' reports were sometimes really insufficient and too short to judge the quality of research outputs. For some of the Heritage Plus projects, this access was possible online, but this was not often the case. Finally, one last recommendations would be to systematise the circulation of meetings minutes, or at least very short summaries. For few projects, very large quantity of meetings were reported without any means to assess the quality of exchanges and relevance of these meetings. It resulted that it was impossible to establish meaningful comparisons between projects who had 10 meetings and others who had 100 meetings during the same period.

4.7. Dissemination

There are less recommendations about dissemination, except, as it was underlined previously, to distinguish clearly between activities related to dissemination and activities related to stakeholders involvement. The dissemination of projects results was really important, and not only in a scientific way. In general, the dissemination to non-academic public and the general public was performed quite successfully by Heritage Plus projects, even if they might have over-estimated, in their intermediate reports, the impact of classic media (printed media, printed material) compared to online instruments and social media. As an example, very few newsletters were issued by research projects, which are normally classic means of dissemination for projects involving large communities of stakeholders. For few other projects, websites were created only during the last year, reducing considerably the possibility to disseminate projects results during their lifetime. However, Heritage Plus projects globally demonstrated an innovative and extensive use of digital media possibilities.

4.8. Project's sustainability

All the Heritage Plus projects shared the issue of their follow up: what happens the day after, who will take care of the results (particularly online tools), and how will these results continue to be accessible after the end of the projects. This was maybe the major point raised by the 16 Heritage Plus transnational research projects, with different levels of

concern, depending of their plans for the future. Follow-up and sustainability are vital, to ensure utility and relevance of the research conducted, and avoid a waste of time and money. Many projects with their research achievements were really close to becoming useful and having a consequent impact on the general society, the major question was how to cross this small step. We already described how different projects implemented mechanisms to ensure sustainability of their research results. Here are some other recommendations for future calls that could help fostering this sustainability. They were suggested either by JPI-CH Scientific Committee members, or by JPI-CH partners during the two international workshops organised by the JPI-CH coordinator, in Brussels and in Torino[42].

The first recommendations would be to pay attention to the sustainability of projects results from the beginning of the projects, and especially in the initial proposals. In particular the digital sustainability of results (databases, platforms, softwares, websites). This should be integral part of the evaluation of the proposals, rather than a problem raised at the end of the research projects. Indeed, it was rather frustrating to discover that some tools would not be kept alive, while they were just created. Another possibility, which is also complementary, would be to create specific funding mechanisms allowing the continuation of these projects and sustainability of results. Most of the projects released important results and policies, but discovered that there was no money to apply these. Sometimes the level of funding needed was really low. For instance, the project EUWATHER, which was really successful in growing awareness among local communities and authorities, resulted sometimes in local municipalities trying to grant very small funding to carry on the research. These funds can be really useful to fund PHD students, and to concretise projects' achievements. Deliverable 4.2 already underlined that “in some cases, extra funding would be needed to enable more profound collaboration, especially when exceeding the projects duration, which is in some cases to be expected given the already quite busy project schedules”. National funding agencies and the EC, could set aside, from the beginning, one of two years of extra fundings dedicated exclusively to the exploitation of results. These fundings could have a considerable impact, not only on the projects sustainability, but also on these projects market potential, as well as on the uptake of results by relevant stakeholders, especially policy makers and influencers. As a final recommendation, the JPI-CH should offer, through a high quality platform, the possibility to showcase, or sometimes host all these projects results. This repository service would bring immediate added-value to the projects. This would be technically difficult on the official JPI-CH website, but possible on the Heritage Portal[43], whose re-designing (included in JHEP2 tasks and deliverables) should allow to act as a hub.

42 See Section 1.5

43 http://www.heritageportal.eu/

4.9. Relation to JPI-CH strategic research agenda and Heritage Plus topics

We had the opportunity, previously in Section 3.2.9 of this deliverable, to describe the way JPI-CH Strategic research Agenda priorities were understood and implemented by the 16 Heritage Plus transnational research projects. On this basis, one can notice the really extensive way these priorities were understood, raising the need to define and relate to more targeted research objectives. The whole JPI-CH consortium is actually heading towards the redefinition of its SRA, and its transformation in a Strategic Research and Innovation Agenda (SRiA), after the creation of a special Task Force therefore in June 2018. The whole Heritage Plus experience confirmed that this would be beneficial and recommended to reach more targeted research and finance more objective-driven research projects, with immediate and concrete impact. The JPI-CH Scientific Committee also concluded during the last review, that projects should not feel obliged to connect with all call or SRA topics, and that the more focused a project was, the more successful and impactful it may be. This should also be an important recommendation for next JPI-CH calls.

4.10. Additional recommendations for JPI-CH

As the two Deliverable D4.2 and D4.3[44] underlined, the JPI-CH will now have to further nurture the community of research and of interested stakeholders created through these Heritage Plus research projects. This work already started during the two international workshops organised in Brussels and Torino by the JPI-CH coordination, it should now continue, including by other means. As an example, Heritage Plus Task 4.1 recommended the simple mean of having these researchers presenting their fields of interest and potential activities at the JPI-CH website, in order to facilitate networking, future joint research and applications. As we said previously, the JPI-CH website or the Heritage Portal should showcase these research projects and research teams, fostering the formation of a sustainable research network.

Another additional recommendation concerns the EU top-up funding, and the setting of conditions under which this top-up was generally awarded. To maximise the added value of the EU top-up funding, this could be conditioned or used partly to finance items that are not possible to fund under several national or regional agencies legislations, and that would bring real benefits to research project follow-up and impact: items such as the uptake by the private sector and exploitation plans, further dissemination, funding of specific kind of stakeholders and specific follow-up programmes. These would also echo the recommendations already formulated previously in this report, regarding the need to create specific mechanisms to allow more sustainability, more anchoring on the market, and more impact on policy makers and influencers of the Heritage Plus transnational

44 See section 1.1

research projects.

4.11. Additional recommendations for reporting

The following recommendations were partly driven from the Task 4.1 reports (4.1, 4.2 and 4.3[45]), from several Scientific Committee recommendations formulated during the reviews, and also from conclusions of the two international workshops organised by the JPI-CH coordination in Brussels and in Torino, and where Heritage Plus projects had the opportunity to present their intermediate research results. They cover mainly aspects that would allow to improve the monitoring exercise for future calls. They sometimes join recommendations already formulated above, but it seemed important to come back on these aspects.

The Heritage Plus Scientific Committee highlighted during the last review meeting, in Rome, in June 2018, the difficulty to evaluate the quality and potential impact of the Heritage Plus research projects on the basis of the different reports collected through Task 4.1. They expressed the difficulty, sometimes, to link the quantitative information provided by projects with the qualitative information. Some projects were more successful than other in establishing and making this link visible, and this made the difference between good and average reports. The Scientific Committee recognised that writing such reports was a competence on itself, and many projects were criticised for neglecting these reports and mixing initial due objectives with final concretely done results. Some recommendations were made on how to improve these aspects. The first recommendation was to facilitate the access to a selection of Heritage Plus projects deliverables for the Scientific Committee, and when it was impossible, to include the executive summaries for deliverables inside the reports. The second recommendation was that reporting formats needed to be revised, in order to better reflect quality, more than quantity. SC members also suggested to make the issue of impact more integral part of the initial projects proposals, maybe asking for the definition of indicators to follow the projects' progress. They estimated also that projects Descriptions of Work should also better reflect on specific objectives, in order to facilitate the assessment of the achievements: projects could have, the possibility to define these objectives during their reporting, and for each objective, describe the extent to which these were achieved by proposing a selection of 4 or 5 corresponding research outputs. This would allow to narrow the focus of the quantity of information reported by the different research projects, by linking this information to relevant achievements. Another recommendation was to have more continuity between reports, in order to facilitate comparison between the different reporting periods, and emphasise the evolutions and progress. Finally, it was suggested to assign a Scientific auditors who would strictly follow each of the projects from the beginning, or at least have the same Scientific Committee members following one project from the beginning. This would require lot of logistic, time and cost, but would allow more continuity in the follow-up, having a more substantial idea of what has been done at the end of the projects.

45 ibid

4.12. Summary of recommendations

- Sharpen the focus of the call's topics: 1) in order to better target and be more able to face the potential number of proposals; 2) in order to reduce the broad nature of transnational research projects which sometimes complicates the process of reaching results.
- Secure sufficient means to face the potential technical and administrative burden caused by the participation in the call, especially at the level of national or regional agencies.
- Further involve Associated Partners and give them active tasks in the initial proposals, that are not directly part of the research process. In general, projects should involve Associated Partners more extensively of funding schemes allow so.
- Stakeholders categories used for projects' monitoring and reporting should be more flexible and unambiguous, possibly by adding 2 or more categories (students, private sector etc.)
- Monitoring should focus more on the qualitative nature of projects' activities with stakeholders, rather than on the quantity of activities performed and stakeholders reached.
- Projects' proposals should clarify from the beginning the process foreseen to reach policy makers and influencers.
- The use of more concise outputs such as policy briefs, guidelines and recommendations should be systematised to better address specific groups of stakeholders.
- The JPI-CH might consider playing an more active role in bringing projects' results to high level policymakers and influencers.
- Projects should emphasise education and capacity building, and this aspect should receive more attention and dedicated funding in future calls and proposals.
- JPI-CH should consider the possibility to direct special funds to “after activities” (after the end of the research projects) addressed directly to capacity building with stakeholders.
- JPI-CH partners should consider the possibility to dedicate additional funding that would be awarded after the end of the project, in order to concretise exploitation plans produced by the projects, or intermediate funding instrument to fil the gap between the closure of the project and the bringing to the market.
- Projects publications should be reported in a way that reflects more their qualitative nature (type of medium, potential audience...).
- JPI-CH should consider mechanisms to follow these publications long after the end of the projects, for instance by using the JPI-CH evaluation and monitoring team.

- In a general manner, JPI-CH partners would need to define a systematic approach for the measure of long term and indirect impact of financed projects.
- As for publications, when reporting other scientific outputs produced, research projects should have the possibility to reflect more on their quality rather than on their quantity.
- Monitoring should ensure that projects are aware of the information they will have to report on from the beginning of their research activities, in order to facilitate upstream collection of relevant information.
- Research proposals should include very clear deliverables lists and corresponding Gantt chart from the beginning.
- Access to deliverables should be guaranteed to Heritage Plus monitoring team and the Scientific Committee, and if this is impossible, executive summaries of these deliverables should be included in the periodic reports.
- The circulation of meetings minutes, or at least very short summaries should be systematised in the research projects.
- Periodic reports and monitoring should distinguish clearly between activities related to dissemination and activities related to stakeholders involvement.
- The impact of online and social dissemination media should be included and taken into account from the beginning, in projects' proposals and communication strategies.
- Research proposals and their evaluators should pay attention and include plans for sustainability of results from the beginning.
- JPI-CH partners and the EC should consider the possibility to create specific funding mechanisms allowing the continuation of projects, the sustainability and exploitation of results.
- The JPI-CH should offer the possibility, through a high quality platform, to showcase, and perhaps also host financed projects results.
- Projects should not feel obliged to connect with all call or SRA topics.
- Call partners should consider the possibility to define more objective-driven research topics for next calls. Therefore, the JPI-CH might consider a revision of its Strategic research Agenda.
- The JPI-CH online platforms should offer the possibility to the financed projects and researchers to showcase their activities.
- In a general manner, reporting and monitoring formats would need to be revised, in order to better reflect results' quality, more than quantity.
- The issue of impact should be made integral part of the initial projects proposals, eventually asking for the definition of indicators to follow the projects' progresses.

- Monitoring and reporting could ensure even more continuity between reports, in order to facilitate comparison for SC members.
- The monitoring team should consider ways to allow more intensive follow-up of projects by Scientific Committee, and ensure more continuity in this follow-up.

Annex I_MS10, Impact Questionnaire to Heritage Plus projects

The questionnaire below was distributed among the projects using the Limesurvey online survey instrument. The original texts and questions are presented below with the complete answers of the 11 respondents.

Heritage Plus Impact Survey_Final version_May 2018

In 2014, you successfully passed the selection procedures and were part of the 16 projects funded by the Heritage Plus Call for proposals launched by the Joint Programming Initiative Cultural Heritage and Global Change, a Challenge for Europe (JPICH).

Most of the projects funded by the Heritage Plus Call will end in 2018.

The following survey is intended to be part of the preparation of an impact report, that will be published around the end of 2018. This report will assess the results of the different aspects of the Joint Call (selection procedures, administrative procedures, research process and results...) in order to improve efficiency and relevance of future Joint Calls, and to evaluate the benefits of the Joint Call towards the objectives of achieving a better integration of the cultural heritage research community in the European Research Area and increasing the coordination between research funding players.

Completing the 18 questions of this survey should take approximately 10 to 15 minutes.

We thank you in advance for your really important participation.

Part 1: Call procedures and documents

1. How would you judge the following elements (answers in %)?

	Very bad	Bad	Moderate	Good	Very good	Do not remember
Clarity of Heritage-Plus call guidelines for applicants;	0	0	9	36	55	0
Clarity of Heritage-Plus FAQs and Glossary;	0	0	9	45	27	18
Clarity of Heritage-Plus pre-proposals templates;	9	0	9	27	36	18
Clarity of Heritage-Plus full-proposals templates;	9	0	0	36	36	18
Clarity and transparency of National eligibility criteria;	0	0	18	55	27	0
Clarity and transparency of application procedures;	0	18	0	55	27	0
Clarity and transparency of the Heritage Plus website.	0	18	36	27	9	9

2. Did you already participate to a similar transnational Call for proposals before your participation to Heritage Plus?

Yes: 36%
No: 64%

3. If yes, how would you judge the following statements compared to your previous experience (answers in %)?

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Do not remember
The submission of proposals was smooth and easy;	25	0	0	75	0	0
The given period of time for the preparation of the pre-proposals was sufficient;	0	0	25	75	0	0
The given period of time for the preparation of the full-proposals was sufficient;	0	0	25	75	0	0
The feedbacks during the evaluation phase were clear and transparent;	0	25	0	25	50	0
The funding process (contract negotiation, conditions, transfer of the first funding tranche) was adequate in time and effort;	25	0	25	50	0	0
Interactions with the national/regional agencies were constructive and effective;	0	25	50	25	0	0
Interactions with the call secretariat were constructive and effective;	0	0	0	25	75	0

3 bis. If no, based on this first experience, how would you judge the following statements?

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Do not remember
The submission of proposals was smooth and easy;	14	29	0	29	29	0
The given period of time for the preparation of the pre-proposals was sufficient;	0	0	0	71	29	0
The given period of time for the preparation of the full-proposals was sufficient;	0	0	0	71	29	0
The feedbacks during the evaluation phase were clear and transparent;	0	0	0	43	29	29
The funding process (contract negotiation, conditions, transfer of the first funding tranche) was adequate in time and effort;	57	29	0	0	14	0
Interactions with the national/regional agencies were constructive and effective;	14	29	29	0	29	0

Interactions with the call secretariat were constructive and effective;	0	0	0	57	43	0

4. Would you be willing to apply to another JPI-CH transnational call for proposals in the future?

Yes: 91%
No: 9%

Additional comments:

- The Italian funding process was totally inadequate.
- Marked 'disagree' for one point the transfer of funds - this was only the case for our Italian partners, and not the case for the UK and the Dutch science foundation is where transfer was smooth.
- There were significant issues with the national research agencies with regard the transfer of funds to partner countries. There also appeared some confusion on their involvement in the JPI. The JPI team themselves were, however, extremely helpful at all times.
- Would you be willing to apply to another JPI-CH transnational call, only if the national Agency will really provide a funding process adequate in time and effort.

Part 2: Participation to Heritage-plus

1. Do you agree with the following statements concerning your experience with the transnational instrument Heritage-Plus (answers in %)?

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Heritage-Plus transnational call was the most appropriate funding mechanism for my particular project	0	0	36	18	45
Heritage-Plus transnational call was complementary to other funding instruments for my particular project	0	18	36	45	0
Applying to Heritage-Plus was more interesting than applying to national/regional funding	0	0	9	45	45
Participating in Heritage-Plus call gave me the experience to later participate in a Framework Programme (H2020)	9	9	36	27	18
Heritage-Plus has speeded up the realisation of my project.	9	0	9	27	55

2. Did your project benefit from other transnational funding mechanisms in addition to Heritage-Plus Call?

Yes: 9%
No: 91%

Could you list these mechanisms?

- Some of our efforts coincided with H2020 ‘Iperion‘ where I am involved as a task leader

3. Would your project have been possible without Heritage-Plus?

Yes: 9%
No: 91%

4. How would you rate the influence of the following factors on the successful conduct of your project (1 to 5: 1=no influence at all / 5=really strong influence) (average)?

List of Factors	Average
1. Commitment of main partners to the project	4,45
2. Commitment of associated partners to the project	3,55
3. Instability of consortium, change of partners	1,82
4. Too many participants (main partners and associated partners)	1,64
5. Creating concrete co-operation with main partners	4,27
6. Creating concrete co-operation with associated partners	3,73
7. Main partners had different objectives	2,45
8. Change of objectives (own, main partners) during the project	1,64
9. Objectives that were too ambitious and unrealistic	2,09
10. Reliability of main partners in carrying out subtasks	3,36
11. Varying competence levels among the main partners	2,64
12. Cultural differences in communication and working methods	2,36
13. Varying technical solutions and standards	2,18
14. Insufficient financial resources	2,73
15. Ownership and sharing of outcome	2,18
16. Rearrangements in your Institution or in main partner's institutions	2,36
17. A prolonged project and the problems resulting from it	1,91
18. Delayed funding	3,27

5. Compared to the participation in a national/regional funding scheme, do you think that your participation in Heritage-Plus transnational call... (answers in %)

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Required less administrative efforts to manage	18	27	27	18	9
Was more flexible	18	18	36	27	0
Provided access to higher-quality additional expertise and/or facilities	9	18	0	55	18
Pursued more ambitious objectives	0	9	9	27	55
Had a higher probability of success	18	9	18	27	27
Produced higher quality results	0	9	27	27	36

6. Compared to the participation in a European framework programme funding scheme (H2020), do you think that your participation in Heritage-Plus transnational call... (answers in %)

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Required less administrative efforts to manage	0	9	55	18	18
Was more flexible	0	9	64	9	18
Provided access to higher-quality additional expertise and/or facilities	0	9	82	0	9
Pursued more ambitious objectives	0	9	73	9	9
Had a higher probability of success	0	9	55	9	27
Produced higher quality results	0	0	82	0	18

Part 3: research results and impact

1. Please describe Heritage-Plus effects for your institution / organisation in terms of: (answers in %)

	Increase	Decrease	No change	Not applicable
Research & Development expenses (budget)	73	0	9	18
Research & Development personnel (research units)	64	0	18	18
Turnover	27	0	27	45

2. Has the participation to Heritage-Plus allowed non- permanent personnel to get a permanent position, in your institution / organisation or in another partner institution/organisation?

Yes: 18%
No: 82%

Could you list these positions?

- Senior researcher at RCE; CMOP contributed to establishing this. Same for Tate- that took on CMOP post-doc for a Permanent position.
- One full time researcher (PROTHEGO)

3. Has the participation to Heritage-Plus resulted in new business opportunities for your institution / organisation?

Yes: 18%
No: 82%

Could you describe these opportunities?

- The project enabled the development of new technologies which have the potential to provide new business opportunities for my institution (CHIME)
- The participation strengthened the links with associate partners and produced new contacts with international organisations. (CHANGES)

4. Has the participation to Heritage-Plus resulted in access to new know-how for your institution / organisation?

Yes: 91%
No: 9%

Could you describe a bit more?

- We created a network with the associated partners and others who later joined the network, which led to more practical know-how about the needs of heritage institutions, but also to benefitting from their specific competences. (EUROMAGIC)
- The outcomes of the HP were a good opportunity to improve further scientific relationships and to enhance the collaboration with local stakeholders. The achieved know-how was besides utilised in developing new project proposals, we are actually going ahead. (EUWATHER)
- Especially computation know-how, opening the relationship with a new scientific domain. Specific new topics were address thanks to the project (automatic music machines, popular song on the first world war, etc.) (HERITAMUS)
- Analytical methodology developed at RCE now also implemented at uni Pisa and vice versa (CMOP)
- The comparison with other Countries and the parallel investigation carried out deepened our understanding of the issues, on which we are working. (CHANGES)
- Satellite monitoring for the CH (PROTHEGO)
- The participation to Heritage-Plus allowed our institution to upgrade its know-how in the field of remote sensing applied to Cultural Heritage, in particular in respect to the satellite remote sensing. (CLIMA)

5. How will the research results of your project be used? (answers in %)

	Yes	No
R&D efforts in your organisation / institution	82	18
Production and business operations	0	100
Other participants in the project consortium will use the results	82	18
Associated partners in the project consortium will use the results	100	0
The results will be used by an organisation / institution not involved in the project's consortium	55	45
In other transnational joint projects	64	36
Concrete results and benefits cannot be foreseen yet	0	100
Results will not be used	0	100

6. Will the project continue after the participation in the Heritage-Plus transnational call for proposals? (answers in %)

	%
Yes, with a project within this consortium	9
Yes, separately with an in-house project in your institution / organisation	36
Yes, separately with an in-house project in another institution / organisation	55
No	0

7. Please describe your research project contribution to each of the initial aims of the heritage-plus transnational call for proposal (answers in %):

	Very poor	Poor	Fair	High	Very high
To support well- defined, interdisciplinary and collaborative R&D projects of the highest quality and standards that will lead to significant advances in our understanding of cultural heritage across the broader research community and in society	0	0	9	55	36
To maximise the value of research outcomes by promoting their transfer to individuals and organisations outside the immediate research community, to include, policy makers, businesses and commercial enterprises, the broader heritage sector, voluntary and community groups and the general public; where appropriate, to facilitate the knowledge transfer of those outcomes to both the research community and society where they will make a difference	0	0	18	64	18
To support a range of interactions and partnerships between cultural heritage researchers and a variety of user communities, to include, policy makers, businesses and commercial enterprises, the broader heritage sector, voluntary and community groups and the general public	0	0	27	55	18
To generate new and exciting knowledge exchange opportunities, foster entrepreneurial talent, and stimulate innovation so improving the competitiveness, productivity, and performance of businesses and commercial enterprises	0	18	36	27	18

8. How would you describe your project's impact on each of the following Heritage-Plus transnational call topics, after the end of the project? These topics were drawn from areas identified in the JPI-CH strategic research agenda, and were already prioritised in your initial research proposal? (answers in %)

	Less than expected	As expected	More than expected
Safeguarding tangible cultural heritage and its associated intangible expressions	9	64	27
Sustainable strategies for protecting and managing cultural heritage	0	64	36
Use and re-use of all kinds of cultural heritage	9	55	36

9. How would you finally describe the impact of your participation in the Heritage-Plus Call for proposals in 4-5 key words?

– raising awareness of cultural heritage and its potential for re-use – building an international network of researchers and heritage institutions – scholarly publications – knowledge dissemination through the project website and project newsletter – practical recommendations for stakeholders wanting to engage with this cultural heritage
– growing local awareness – sustainability consciousness – heritage recovery – environmental quality
– Community oriented – Ethnographic and historical community knowledge – Democratisation of curatorship – Tangible and intangible articulation – knowledge transfer across scientific areas, specialists, community members, practitioners, laypersons.
– Practical conservation – Art technology – Prevention – Understanding ageing processes
– Promoting meaning-making – Audience Development – Impact on the Knowledge Economy: Travelling Exhibition – Social impact and critique – New interdisciplinary working methods
– Dissemination – debate – new knowledge – inclusion
– Sharing knowledge – Understanding the differences among National contexts – Exchanging good practices – Understanding barriers and stakeholders' attitudes – Getting in touch with stakeholders
– positive – fruitful stimulating – challenging

Annex II_Project Interview N°1

Interview 1 summary

Loes Veldpaus (PICH)

Background

- Loes Veldpaus is educated as an architect, who later specialised in urban governance and heritage management. She is affiliated with the Newcastle University.
- PICH investigates the impact of urban planning and governance reform on the historic built environment and intangible heritage. In this context, Veldpaus looked at

Output

- Several historical landscape recommendation workshops organised for the associated partners all across Europe.
- A final conference in Delft, the Netherlands.
- Interviews and conversations with stakeholders.
- Exposure and publicity were achieved through a website and social media. Especially social media reached a lot of people.

Positive outcomes

- With a PhD-degree in almost all of the partaking countries, a community of practice was formed. Knowledge of the several projects was transferred and discussed; it made a comparison between the planning systems possible.
- The importance of the international cooperation lies in the ability of comparing the different case studies. In all countries the same trends are visible, but they work out differently everywhere. This doesn't necessarily mean that comparison is an easy task.
- Researches joined local heritage groups in their area, to invest and give back to their heritage management.
- After a few changes in the consortium, the number of participating countries is now quite stable. Participants know each other, can manage expectations

Negative factors

- As a partner outside of Europe, China was not able to give additional value to this project. This is due to the lack of funding, which in turn mean that a fraction of the work that is done in other countries could be done in China.
- Funding was a problem not only in China; it caused a shift within the consortium of European countries as well, particularly lack of Italian funding.

Effects

- In all cities and countries under investigation, a trend of commodification of European heritage is noticeable. Partnerships are open to negotiation and other stakeholders are becoming active in heritage management. Adding, third sector organisations are getting involved as well, as they view heritage as beneficial to the city by means of branding, attracting tourism and investments.

Lessons

- Organisations in the private sector seem to more protective of heritage, when they start to work in the field. However, this conception is often changed quite quickly to a more experimental or progressive stance.
- Although it might be for financial reasons (as industrial heritage has become popular), private organisations realise the importance of cultural heritage; an important development.
- As a field, heritage is always closely related to practice. It is important to engage with stakeholders in the field.
- A successful research takes years of preparation and draws upon a vast network of people. Veldpaus' drew upon the network of her professor.

Annex III_Project interview N°2

Interview 2 summary

T.H. Moore (REFIT)

Background

- Dr. T.H. Moore is affiliated to the Durham University in the United Kingdom (UK).
- As an archaeologist by training Moore conducted research at the Oppida & Urbanism and Bribacte and its environment in France.
- In the context of REFIT, Moore researches the transference of knowledge and a sustainable landscape management. This inquiry is takes place in close cooperation with partners in France and Spain.

Output

- All forms of websites; a WIX-website, wordpress and also a YouTube channel were video's of the programme are posted.
- A visitor centre in Bibracte, France.
- In stead of phone applications, REFIT has launched a PDF-guide and an interactive guide, used for

Positive outcomes

- Cooperation with the Wildlife Trusts (UK) has been successful because this organisation has embedded itself with stakeholders. The organisation has worked as a sensor, and REFIT was able to feed onto this.
- In one of the case studies, in the Cotswolds, stakeholder farmers were taken out on the field and taught about the landscapes they own. The goal of these meetings was to talk about landscape plans and to inform the farmers on how to apply for relevant funding.
- REFIT has changed the way that stakeholders view the landscape and work together; in Bibracte, not one stakeholder was even interviewed before REFIT.
- REFIT had a lasting effect in Andalucía, were ancient irrigation channels are being reused.

Negative factors

- Although not a negative outcome of the REFIT-programme, it is important to note that governmental bodies in the UK have to deal with increasingly less funding. For example, it has become impossible for Historic England to maintain their schedule of listed monuments.
- REFIT offered too little funding; the maintaining of the several web activities have been paid out of the researcher's own pockets.

Effects

- As governmental bodies struggle with funding, private organisations and NGO's are taking the roles that were previously played by the government.

Lessons

- There is a disconnect between different stakeholders that are involved in several of the programmes. For example, farmers have no clue how to communicate with the relevant governmental parties, let alone recognise the partners with whom to deal. When changes in the landscape are made, local inhabitants are sometimes not even informed.
- It is important to have a 'landscape leader', that is visible in the field and that deals with stakeholders. Its vast network can then be used to carry certain projects.
- As governmental bodies struggle with funding, private organisations and NGO's are taking their place. This can have a very positive outcome, as projects will be organised from the bottom-up. However, newly created organisations struggle with exposure and publicity.
- Although it may not seem surprising, research has shown that Europeans value their history and heritage. JPI has shown that European value their identity.
- To gain sustainability for a certain heritage site, stakeholders can play an important role. In Bribacte, stakeholders cooperated in thinking of ways in making the site and its environment attractive for a longer visit.