Horizon 2020
Cultural Heritage

List of projects
2014-2018

European Commission

Horizon 2020 CULTURAL HERITAGE

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EXCELLENT SCIENCE – INFRASTRUCTURES

CLARIN-PLUS

European Research Infrastructure for Language resources and Technology

CLARIN, the Common Language Resource and Technology Research Infrastructure, has gained force and momentum over the last 10 years. It is being constructed as a distributed e-infrastructure for the Humanities and Social Sciences to enable sustainable access, exploitation and integration of Europe's vast amount of language-based data and related technology.

As stipulated by the ESFRI roadmap, CLARIN is now in the later part of its implementation phase. Indeed, the implementation is already far advanced in many aspects, among these the technical core elements of the infrastructure. However, at this crucial phase, several aspects need additional focused efforts. The 2013 ESFRI high level expert group assessment identified key areas where concentrated actions are needed in order to ensure the broadest possible success of CLARIN. Also following the recommendations of that report, CLARIN-PLUS proposes to accelerate the implementation and to strengthen and consolidate CLARIN in the following areas:

1) The central (technical) hub – Extend the Service Provider Federation; improve metadata quality; tighten webservice integration; improve infrastructure gateways.
2) The central office – Further the internal and external information platforms; work on a professional branding and a higher usability level.
3) Partnerships with other infrastructure initiatives – Beyond existing cooperations, coordinate and implement or strengthen joint services with EUDAT, GÉANT, DARIAH, RDA, Europeana and Hathi Trust.
4) Outreach – Work out a concrete value proposition and use it to attract new countries, centres and users; demonstrate the potential of CLARIN to new user groups.
5) Governance: Revise the statutes, perform a financial analysis and focus on sustainability.

This project will help to adjust the balance between the national CLARIN consortia and centres and CLARIN ERIC, and will improve crucial aspects of CLARIN as a robust European infrastructure.

Project Reference: 676529 **Website:** https://www.clarin.eu/ **EU contribution:** EUR 1 500 000 **From:** 2015 to 2017 **Topic:** INFRADEV-3-2015 **Project coordinator:** CLARIN ERIC, NL	**Project Partners:** UNIVERZITA KARLOVA V PRAZE, CZ EBERHARD KARLS UNIVERSITAET TUEBINGEN, DE KØBENHAVNS UNIVERSITET (UNIVERSITY OF COPENHAGEN), DK	

DESIR

DARIAH ERIC Sustainability Refined

Europe has a long and rich tradition as a centre for the arts and humanities. However, the digital transformation poses challenges to the arts and humanities research landscape all over the world. Responding to these challenges the Digital Research Infrastructure for Arts and Humanities (DARIAH) was launched as a pan-European network and research infrastructure. After expansion and consolidation, which involved DARIAH's inscription on the ESFRI roadmap, DARIAH became a European Research Infrastructure Consortium (ERIC) in August 2014.

The DESIR project sets out to strengthen the sustainability of DARIAH and firmly establish it as a long-term leader and partner within arts and humanities communities. By DESIR's definition, sustainability is an evolving 6-dimensional process, divided into the following challenges:

Dissemination: DESIR will organise a series dissemination events, including workshops in the US and Australia, to promote DARIAH tools and services and initiative collaborations.
Growth: DESIR sets out to prepare the ground for establishing DARIAH membership in six new countries: the UK, Finland, Spain, Switzerland, Czech Republic and Israel.
Technology: DESIR will widen the DARIAH research infrastructure in three areas, vital for DARIAH's long-term sustainability: entity-based search, scholarly content management, visualization and text analytic services.

Robustness: DESIR will make DARIAH's organizational structure and governance fit for the future and develop a detailed business plan and marketing strategy.
Trust: DESIR will measure the acceptance of DARIAH, especially in new communities, and define mechanisms to support trust and confidence in DARIAH.
Education: Through training and teaching DESIR will promote the use of DARIAH tools and services.

The DESIR consortium is composed of core DARIAH members, representatives from potential new DARIAH members and external technical experts. It is balanced between the different European regions.

Project Reference: 676529

Website:

https://www.dariah.eu/activities/projects-and-affiliations/desir/

EU contribution: EUR 2 717 320

From: 2017 to 2019

Topic: INFRADEV-03-2016-2017

Project coordinator: DIGITAL RESEARCH INFRASTRUCTURE FOR THE ARTS AND HUMANITIES, FR

Project Partners:

GEORG-AUGUST-UNIVERSITAT GOTTINGENSTIFTUNG OFFENTLICHEN RECHTS, DE

UNIVERSITEIT GENT, BE

UNIWERSYTET WARSZAWSKI, PL

UNIVERSIDADE NOVA DE LISBOA, PT

FACULDADE DE CIENCIAS SOCIAIS E HUMANAS DA UNIVERSIDADE NOVA DE LISBOA, PT

CENTAR ZA DIGITALNE HUMANISTICKE NAUKE, RS

SIB INSTITUT SUISSE DE BIOINFORMATIQUE, CH

HELSINGIN YLIOPISTO, FL

GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER, DE

INSTITUT NATIONAL DE RECHERCHE ENINFORMATIQUE ET AUTOMATIQUE, FR

KING'S COLLEGE LONDON, UK

UNIVERSITY OF GLASGOW, UK

KNIHOVNA AV CR V. V. I.,,CZ

UNIVERSIDAD NACIONAL DE EDUCACION A DISTANCIA, ES

UNIVERSITY OF HAIFA, IL

EHRI

European Holocaust Research Infrastructure

The European Holocaust Research Infrastructure (EHRI) project seeks to transform archival research on the Holocaust. The vision of EHRI is to integrate the data, services and expertise of existing Holocaust infrastructures on an unprecedented scale. It will allow researchers from across the globe transnational and virtual access to the integrated infrastructure, and provide them with innovative digital tools and methods to (collaboratively) explore and analyse Holocaust sources. EHRI will thereby become an indispensable tool for the study of the Holocaust from a pan-European perspective.

EHRI is based on an advanced community that has already achieved a significant co-ordination of its efforts, not least thanks to the activities undertaken during EHRI's first phase. The aim of the second phase is to further expand this community. The EHRI consortium includes 22 partners, spread across Europe and beyond. This consortium, as well as a network of regional contact points, enables EHRI to reach those regions where much valuable Holocaust source material is located, but where access has hitherto been problematic, especially in South-Eastern and Eastern Europe. EHRI includes measures to build capacity in such regions, thereby ensuring that institutions and people across Europe can contribute to, and make use of, the EHRI infrastructure.

EHRI will continue to serve as a 'best practice' model for other humanities projects, and its innovative approach to data integration, management and retrieval will have impact in the wider cultural and IT industries. Although EHRI is geared towards scholarly communities, open online availability of reliable Holocaust material is important for the larger public, as the Holocaust is deeply rooted in the development of European societies. European support for the study of this most traumatic historical event is essential to achieve a comprehensive approach to the history of the Holocaust as a shared European phenomenon.

Project Reference: 654164

Website: https://www.ehri -project.eu/

EU contribution: EUR 8 000 000

From: 2015 to 2019

Topic: INFRAIA-1- 2014-2015

Project coordinator: KONINKLIJKE NEDERLANDSE ACADEMIE VAN WETENSCHAPPEN, NL

Project Partners:

CENTRE D'ETUDES ET DE DOCUMENTATION GUERRE ET SOCIETES CONTEMPORAINES, BE

ARCHIVES GENERALES DU ROYAUME ET ARCHIVES DE L'ETAT DANS LES PROVINCES, BE
ZIDOVSKE MUZEUM V PRAZE, CZ

STIFTUNG ZUR WISSENSCHAFTLICHEN ERFORSCHUNG DER ZEITGESCHICHTE - INSTITUT FUR ZEITGESCHICHTE IFZ, DE
KING'S COLLEGE LONDON, UK

YAD VASHEM THE HOLOCAUST MARTYRS AND HEROES REMEMBRANCE AUTHORITY, IL

THE UNITED STATES HOLOCAUST MEMORIAL MUSEUM, US

BUNDESARCHIV, DE

THE WIENER LIBRARY INSTITUTE OF CONTEMPORARY HISTORY LBG, UK

INTERNATIONAL TRACING SERVICE, DE

ZYDOWSKI INSTYTUT HISTORYCZNY IM. EMANUELA RINGELBLUMA, PL

MEMORIAL DE LA SHOAH, FR

WIENER WIESENTHAL INSTITUT FUR HOLOCAUST- STUDIEN – VWI, AT

"INSTITUTUL NATIONAL PENTRU STUDIEREA HOLOCAUSTULUI DIN ROMANIA "ELIE WIESEL", RO

MAGYARORSZAGI ZSIDO HITKOZSEGEK SZOVETSEGE TARSADALMI SZERVEZET, HU

INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, FR

VALSTYBINIS VILNIAUS GAONO ZYDU MUZIEJUS, LI

DOKUMENTACNE STREDISKO HOLOKAUSTU OBCIANSKE ZDRUZENIE, SK

STOWARZYSZENIE CENTRUM BADAN NAD ZAGLADA ZYDOW, PL

FONDAZIONE CENTRO DI DOCUMENTAZIONE EBRAICA CONTEMPORANEA -CDEC – ONLUS, IT

THE JEWISH MUSEUM OF GREECE, EL

KAZERNE DOSSIN MEMORIAAL, MUSEUM EN DOCUMENTATIECENTRUM OVER HOLOCAUST EN MENSENRECHTEN, BE

ONTOTEXT AD, BG

ELEXIS

European Lexicographic Infrastructure

The project proposes to integrate, extend and harmonize national and regional efforts in the field of lexicography, both modern and historical, with the goal of creating a sustainable infrastructure which will (1) enable efficient access to high quality lexical data in the digital age, and (2) bridge the gap between more advanced and lesser-resourced scholarly communities working on lexicographic resources. The need for such an infrastructure has clearly emerged out of the lexicographic community within the European Network of e-Lexicography COST Action which will end in 2017.

Current lexicographic resources, both modern and historical, have different levels of structuring and are not equally suitable for application in other fields, e.g. Natural Language Processing. The project will develop strategies, tools and standards for extracting, structuring and linking lexicographic resources to unlock their full potential for Linked Open Data and the Semantic Web, as well as in the context of digital humanities.

The project will help researchers create, access, share, link, analyze, and interpret heterogeneous lexicographic data across national borders, paving the way for ambitious, transnational, data-driven advancements in the field, while significantly reducing a duplication of effort across disciplinary boundaries.

ELEXIS will be carried out by a balanced consortium with distributed geographical origins. It is composed of content-holding institutions and researchers with complementary backgrounds - lexicography, digital humanities, language technology and standardization - a crucial feature required to address the multi-disciplinary objectives of the project. In cooperation with CLARIN and DARIAH, it will focus on defining and providing common interoperability standards, workflows, conceptual models and data services as well as training and education activities focusing on user needs and cross-disciplinary fertilizations.

Project Reference: 731015	Project Partners:	K DICTIONARIES LTD, IL
Website: https://elex.is/	LEXICAL COMPUTING CZ SRO, CZ	CONSIGLIO NAZIONALE DELLE RICERCHE, IT
EU contribution: EUR 4 999 967,50	STICHTING INSTITUUT VOOR DE NEDERLANDSE TAAL, NL	DET DANSKE SPROG- OG LITTERATURSELSKAB, DK
From: 2018 to 2022	INSTITUTE FOR BULGARIAN LANGUAGE PROF LYUBOMIR ANDREYCHIN, BG	KOBENHAVNS UNIVERSITET, DK
Topic: INFRAIA-02-2017	UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA, IT	UNIVERSITAT TRIER, DE
Project coordinator: INSTITUT JOZEF STEFAN, SI	NATIONAL UNIVERSITY OF IRELAND GALWAY, IE	EESTI KEELE INSTITUUT, EE
	UNIVERSIDADE NOVA DE LISBOA, PT	REAL ACADEMIA ESPANOLA, ES
	OESTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN, AT	INSTITUTE FOR BULGARIAN LANGUAGE PROF LYUBOMIR ANDREYCHIN, BG
	CENTAR ZA DIGITALNE HUMANISTICKE NAUKE, RS	MAGYAR TUDOMANYOS AKADEMIA, NYELVTUDOMANYI INTEZET, HU

E-RHIS

EU Research Science Infrastructure for Heritage Science (Preparatory phase)

E-RIHS PP is a coordination and support action addressing the topic "Preparatory Phase and support to early phase of ESFRI projects" within the call H2020-INFRADEV-02-2016. The specific action addressed by this project is the preparation of E-RIHS, the European Research Infrastructure for Heritage Science (HS), one of the six new projects which entered the ESFRI Roadmap in 2016, and the only research infrastructure project in the Social and Cultural Innovation section of the Roadmap. E-RIHS will help the preservation of the World's Heritage by enabling cutting-edge research in HS, liaising with governments and heritage institutions to promote its constant development and, finally, raising the appreciation of the large public for cultural and natural heritage and the recognition of its historic, social and economic significance.

E-RIHS PP will start in 2017 and will last three years (2017-2020). The first two will be used to address governance, financial aspects, legal documents and logistics. This will lead to a business plan ready for application to ERIC, or to another suitable legal form, by 2019. The last year will be devoted to negotiations with stakeholders, based on the agreed instruments, further strategic planning and to start up of activities for entering the transition phase. E-RIHS will hopefully be launched as a stand-alone RI in 2021.

Project Reference: 739503	Project Partners:	THE DISCOVERY PROGRAMME : CENTRE FOR ARCHAEOLOGY AND INNOVATION IRELAND, IE
Website: http://www.e-rihs.eu/	KONINKLIJK INSTITUUT VOOR HET KUNSTPATRIMONIUM, BE	ISRAEL ANTIQUITIES AUTHORITY, IL
EU contribution: EUR 3 999 449	THE CYPRUS INSTITUTE, CY	CENTRAL EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM, IT
From: 2017 to 2020	USTAV TEORETICKE A APLIKOVANE MECHANIKY AVCR, CZ	
Topic: INFRADEV-02-2016	DEUTSCHES ARCHAOLOGISCHES INSTITUT, DE	PIN SOC.CONS. A R.L. - SERVIZI DIDATTICI E SCIENTIFICI PER L UNIVERSITA DI FIRENZE, IT
Project coordinator: CONSIGLIO NAZIONALE DELLE RICERCHE, IT	AGENCIA ESTATAL CONSEJO SUPERIOR DEINVESTIGACIONES CIENTIFICAS, ES	
	CONSORCIO PARA LA CONSTRUCCION, EQUIPAMIENTO Y EXPLOTACION DEL CENTRO NACIONAL DE INVESTIGACION SOBRE LA EVOLUCION HUMANA, ES	MINISTERIE VAN ONDERWIJS, CULTUUR EN WETENSCHAP, NL
		UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU, PL
	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR	LABORATORIO NACIONAL DE ENGENHARIA CIVIL, PT
	DIGITAL RESEARCH INFRASTRUCTURE FOR THE ARTS AND HUMANITIES, FR	JAVNI ZAVOD REPUBLIKE SLOVENIJE ZA VARSTVO KULTURNE DEDISCINE, SI
	FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL	UNIVERSITY COLLEGE LONDON, UK
	MAGYAR TUDOMANYOS AKADEMIA ATOMMAGKUTATO INTEZETE, HU	

HAS-DARIAH

A Digital Research Infrastructure for the Art and Humanities

The 'Humanities at Scale' project will further the DARIAH ERIC's aim to integrate digitally enabled research in the arts and humanities in Europe and beyond and to operate a platform to enable trans-national arts and humanities research. The project will help DARIAH sustain existing knowledge in digital arts and humanities in Europe and enable new one. DARIAH connects various hubs of excellence in the domain and helps them share their results and innovations. By sharing knowledge, DARIAH works proactively to enhance the reach of digital arts and humanities within the European Research Area (ERA). This proposals aims to address some critical limitations of the current model of sharing knowledge in DARIAH and of connecting the national services in digital arts and humanities initiatives in Europe.

Project Reference: 675570	**Project Partners:**
Website: http://has.dariah.eu/	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR
EU contribution: EUR 2 000 000	KONINKLIJKE NEDERLANDSE ACADEMIE VAN WETENSCHAPPEN NETHERLANDS, NL
From: 2015 to 2017	
Topic: INFRADEV-3-2015	GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS, DE
Project coordinator: DIGITAL RESEARCH INFRASTRUCTURE FOR THE ARTS AND HUMANITIES, FR	

IPERION CH integrated platform

Integrated Platform for the European Research Infrastructure ON Cultural Heritage

IPERION CH aims to establish the unique pan-European research infrastructure in Heritage Science by integrating national world-class facilities at research centres, universities and museums. The cross-disciplinary consortium of 23 partners (from 12 Member States and the US) offers access to instruments, methodologies and data for advancing knowledge and innovation in the conservation and restoration of cultural heritage. Fourth in a line of successful projects (CHARISMA-FP7, Eu-ARTECH-FP6 and LabS-TECH network-FP5), IPERION CH widens trans-national access by adding new providers with new expertise and instruments to the three existing complementary platforms ARCHLAB, FIXLAB and MOLAB.

The quality of access services will be improved through joint research activities focused on development of new advanced diagnostic techniques and (with DARIAH ERIC) tools for storing and sharing scientific cultural heritage data. Networking activities will (a) promote innovation through technology transfer and dynamic involvement of SMEs; (b) improve access procedures by setting up a coordinated and integrated approach for harmonising and enhancing interoperability among the facilities; (c) identify future scientific challenges, best practices and protocols for measurements; (d) optimise the use of digital tools in Heritage Science. To advance the international role of EU cultural heritage research, IPERION CH will generate social and cultural innovation by training a new generation of researchers and professionals and by worldwide dissemination and communication to diverse audiences. To ensure long-term sustainability, the advanced community of IPERION CH will work towards inclusion in the new ESFRI Roadmap and constitution of a RI with its own EU legal entity (e.g. ERIC). Synergies with national and local bodies, and with managing authorities in charge of ESIF, will expand the scope and impact of IPERION CH in terms of competitiveness, innovation, growth and jobs in ERA.

Project Reference: 654028	**Project Partners:**	MAGYAR TUDOMANYOS AKADEMIA WIGNER FIZIKAI KUTATOKOZPONT, HU
Website: http://www.iperionch.eu/	KONINKLIJK INSTITUUT VOOR HET KUNSTPATRIMONIUM, BE	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA, IT
EU contribution: EUR 8 000 000	DOERNER INSTITUT, BAYERISCHE STAATSGEMÄLDESAMMLUNGEN DE	OPIFICIO DELLE PIETRE DURE, IT
From: 2015 to 2019	STIFTUNG PREUSSISCHER KULTURBESITZ, DE	ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA, IT
Topic: INFRAIA-1-2014-2015	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN, DE	MINISTERIE VAN ONDERWIJS, CULTUUR EN WETENSCHAP, NL
Project coordinator: CONSIGLIO NAZIONALE DELLE RICERCHE, IT	STATENS MUSEUM FOR KUNST, DK	UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU, PL
	AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS, ES	LABORATORIO NACIONAL DE ENGENHARIA CIVIL, PT
	MUSEO NACIONAL DEL PRADO, ES	BRITISH MUSEUM, UK
	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR	THE NATIONAL GALLERY, UK
	INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, FR	THE J. PAUL GETTY TRUST, US
	SOCIÉTÉ CIVILE SYNCHROTRON SOLEIL, FR	MAGYAR TUDOMANYOS AKADEMIA ATOMMAGKUTATO INTEZETE, HU
	FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL	
	IDRYMA ORMYLIA, EL	

PARTHENOS

Pooling Activities, Resources and Tools for Heritage research Networking, Optimization, and Synergies

PARTHENOS aims at strengthening the cohesion of research in the broad sector of Linguistic Studies, Humanities, Cultural Heritage, History, Archaeology and related fields through a thematic cluster of European Research Infrastructures, integrating initiatives, e-infrastructures and other world-class infrastructures, and building bridges between different, although tightly, interrelated fields. PARTHENOS will achieve this objective through the definition and support of common standards, the coordination of joint activities, the harmonization of policy definition and implementation, and the development of pooled services and of shared solutions to the same problems.

PARTHENOS will address and provide common solutions to the definition and implementation of joint policies and solutions for the humanities and linguistic data lifecycle, taking into account the specific needs of the sector that require dedicated design, including provisions for cross-discipline data use and re-use, the implementation of common AAA (authentication, authorization, access) and data curation policies, including long-term preservation; quality criteria and data approval/certification; IPR management, also addressing sensitive data and privacy issues; foresight studies about innovative methods for the humanities; standardization and interoperability; common tools for data-oriented services such as resource discovery, search services, quality assessment of metadata, annotation of sources; communication activities; and joint training activities. Built around the two ERICs of the sector, DARIAH and CLARIN, and involving all the relevant Integrating Activities projects, PARTHENOS will deliver guidelines, standards, methods, services and tools to be used by its partners and by all the research community. It will exploit commonalities and synergies to optimize the use of resources in related domains.

Project Reference: 6541119 **Website:** http://www.parthenos-project.eu/ **EU contribution:** EUR 11 999 711 **From:** 2015 to 2019 **Topic:** INFRADEV-4-2014-2015 **Project coordinator:** PIN SOC.CONS. A R.L. - SERVIZI DIDATTICI E SCIENTIFICI PER L UNIVERSITA DI FIRENZE, IT	**Project Partners:** INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, FR CLARIN ERIC, NL KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN – KNAW, NL THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN, IE CONSIGLIO NAZIONALE DELLE RICERCHE, IT CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS, ES FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL KING'S COLLEGE LONDON, UK OESTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN, AT	ISTITUTO CENTRALE PER IL CATALOGO UNICO DELLE BIBLIOTECHE ITALIANE E PER LE INFORMAZIONI BIBLIOGRAFICHE, IT GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS, DE SOCIETA INTERNAZIONALE PER LO STUDIO DEL MEDIOEVO LATINO-S.I.S.M.E.L.ASSOCIAZIONE, IT ACADEMY OF ATHENS, EL FACHHOCHSCHULE POTSDAM, DE DIGITAL RESEARCH INFRASTRUCTURE FOR THE ARTS AND HUMANITIES, FR

ReIReS

Research Infrastructure on Religious Studies

ReIReS is a starting community whose aim is to create a unique and groundbreaking research infrastructure (RI) on religious studies within the European Research Area. It joints the major European research institutions working in the domain (universities, libraries, archives, academies, research institutions, and museums) to improve the access of scholars from all over the world to the data, information and sources concerning the study of the historical and cultural influence of the plural religious heritage in the European history. Furthermore, it joints research activities of the partners, integrating complementary scientific skills and capabilities, and it organizes networking activities for fostering a culture of co-operation between national research facilities, scientific communities, and other stakeholders including policy makers. ReIReS creates a synergy between the partners, offering a transnational and virtual access to the most significant tools and sources in the field of religious studies. This grants to the research communities the use of the major tools joint within a comprehensive infrastructure and gives to the EU a leading role in a domain, which is becoming more and more crucial for the understanding of inter-cultural dynamics and facing conflicts of our time. Dealing with the need for an appropriate comprehension of a complex and multicultural society, ReIReS consortium works towards the improvement of the integrated services of the partners. It aims to establish a distributed RI with a sustainable plan of activities, including offering access to a wide range of high-level data and tools for advancing knowledge and innovation in the understanding of inter-religious society.

Project Reference: 730895 **Website:** https://reires.eu/ **EU contribution:** EUR 3 083 936,25 **From:** 2018 to 2021 **Topic:** INFRADEV-02- 2017 **Project coordinator:** FONDAZIONE PER LE SCIENZE RELIGIOSE GIOVANNI XXIII, IT	**Project Partners:** SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI, BG KATHOLIEKE UNIVERSITEIT LEUVEN, BE CONSIGLIO NAZIONALE DELLE RICERCHE, IT UNIVERSITAET HAMBURG, DE UNIWERSYTET WARSZAWSKI, PL JOHANNES GUTENBERG-UNIVERSITAT MAINZ, DE ECOLE PRATIQUE DES HAUTES ETUDES, FR	THEOLOGISCHE UNIVERSITEIT APELDOORN, NL LEIBNIZ-INSTITUT FUR EUROPAISCHE GESCHICHTE, DE BREPOLS PUBLISHERS NV, BE STICHTING REFO500, NL

LEIT (ADVANCED MATERIALS)

APACHE

Active and intelligent PAckaging materials and display cases as a tool for preventive conservation of Cultural Heritage

Most Cultural Heritage objects housed by museums are often stored under unsuitable climate conditions. APACHE will develop a cutting edge technology to control and prevent the degradation of such patrimony. The novel approach is based on three pillars: 1) advanced sensing and absorbing materials to control the artifacts' environment; 2) modeling to define the threshold of artifacts' degradation and to discriminate between the need for preventive or remedial conservation; 3) remote control of the works of art stressors. The unique combination of these pillars will reduce to the lowest possible level the costs actually required by conventional technology for art conservation. New generation of active and intelligent display cases, crates, and storage boxes, will be implemented thanks to: i) The unique APACHE partnership, comprising the most important experts in the three aforementioned pillars; ii) The development of easy-to-use sensing devices able to communicate through Wireless Sensor Networks and Radio Frequency Identification Devices thanks to Industry 4.0-5.0 ICT technologies, granting the optimal environmental conditions around the art objects. Multiscale models integrated in an open simulation environment will be used to predict the degradation of artefacts and set the properties of sensors (detection limits) and polyfunctional absorbents. APACHE includes small, medium, and large museums exhibiting representative variety of display and storage conditions. For instance, the Venice Peggy Guggenheim Collection features one of the most important collections of modern/contemporary art, which experiences highly unfavorable environmental conditions, difficult to control with conventional tools. Centre Pompidou and National Museum of Hungary possess a vast amount of artefacts stored in deposits (e.g. in crates and boxes). Moreover, a decision-making tool composed by a modular set of decision trees will be offered to end-users to guide them through the best solutions.

Project Reference: 814496 **Website:** N/A **EU contribution:** EUR 6 837 732.75 **From:** 2019 to 2022 **Topic:** NMBP-33-2018 **Project coordinator:** CONSORZIO INTERUNIVERSITARIO PER LO SVILUPPO DEI SISTEMI A GRANDE INTERFASE	**Project Partners:** MINISTERO PER I BENI E LE ATTIVITÀ CULTURALI, IT CENTRE NATIONAL D'ART ET DE CULTURE GEORGES-POMPIDOU, FR NARODNI MUZEJ SLOVENIJE, SI MAGYAR NEMZETI MUZEUM, HU FONDAZIONE SCIENZA E TECNICA, IT SOLOMON R GUGGENHEIM FOUNDATION, US CONSORZIO INTERUNIVERSITARIO PER LO SVILUPPO DEI SISTEMI A GRANDE INTERFASE, IT CONSIGLIO NAZIONALE DELLE RICERCHE, IT UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK, IE UNIVERSITY COLLEGE LONDON, UK FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, GR CHALMERS TEKNISKA HOEGSKOLA AB, SE INTERNATIONAL CENTRE FOR THE STUDY OF THE PRESERVATION AND RESTORATION OF CULTURAL PROPERTY, IT	NATIONAL TECHNICAL UNIVERSITY OF ATHENS – NTUA, GR UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, BRAZIL ZFB ZENTRUM FUR BUCHERHALTUNG GMBH, DE IONFLY VACUUM AND PLASMA TECHNOLOGY SRL, IT UNIVERZA V LJUBLJANI, SI MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV, DE FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V, DE UNIVERSITA CA' FOSCARI VENEZIA, IT BEWARRANT, BE MIRABILE ANTONIO, FR GOPPION S.P.A., IT AKZO NOBEL PULP AND PERFORMANCE CHEMICALS AB, SE ERICSSON AB, SE

INNOVACONCRETE

Innovative materials and techniques for the conservation of 20th century concrete-based cultural heritage

InnovaConcrete is an innovative and ambitious project that aims at preserving concrete-based monuments, the most significant tangible Cultural Heritage (CH) in the 20th Century. To achieve this goal, we have recruited an interdisciplinary team presenting a strong scientific background in simulation techniques and nanomaterials synthesis, combined with a wide knowledge of CH conservation from Humanities disciplines and, a sound industrial perspective. Specifically, a completely innovative approach based on producing C-S-H gel, responsible for the engineering properties of cement paste in cracks of decayed concrete monument, in situ, will be developed. Complementary, other innovative solutions giving rise to superhydrophobicity and corrosion inhibition will be also investigated. In addition, InnovaConcrete explores an approach based on biotechnology: enzyme-assisted self-healing of damaged surfaces. The optimisation of the solutions proposed will be carried out by the use of theoretical tools (multi-scale modelling approaches) together with experimental tools (laboratory and in situ validation). Significant 20th century monuments, such as the spectacular building, Centennial Hall, the open-air sculptures of Eduardo Chillida, War Memorial Towers and concrete shell structures, typical construction in communist period are used as case studies to validate the performance of the solutions proposed. These monuments, a clear representation of European CH, are employed to study economic and other societal effects of the proposal and to promote citizens' awareness of 20th century European heritage. Finally, the activities required for the future commercialization of the InnovaConcrete products, including standardisation, certification, life cycle assessment, scaling up and exploitation strategies are carried out.

Project Reference: 760858	Project Partners:	WROCLAWSKIE PRZEDSIEBIORSTWO HALA LUDOWA ZOO, PL
Website: http://innovaconcrete.net	THE RESEARCH COMMITTEE OF THE TECHNICAL UNIVERSITY OF CRETE, EL	FUNDACIÓN EDUARDO CHILLIDA Y PILAR BELZUNCE, ES
EU contribution: EUR 6 882 086	UNIVERSITAETSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITAET MAINZ, DE	MINISTERO DEI BENI E DELLE ATTIVITA CULTURALI E DEL TURISMO, IT
	BEWARRANT, BE	
	TECHEDGE GMBH, DE	
From: 2018 to 2020	CONSIGLIO NAZIONALE DELLE RICERCHE, IT	INES INGENIEROS CONSULTORES SL, ES
Topic: NMBP-35-2017	CONSORZIO INTERUNIVERSITARIO PER LO SVILUPPO DEI SISTEMI A GRANDE INTERFASE, IT	UNIWERSYTET LODZKI, PL
Project coordinator: UNIVERSIDAD DE CADIZ, ES		ESTUDIO GUADIANA, ES
	FUNDACION TECNALIA RESEARCH & INNOVATION, ES	CONSEIL INTERNATIONAL DES MONUMENTSET DES SITES ASSOCIATION, FR
	TECHNISCHE UNIVERSITAT DARMSTADT, DE	FUNDACION DOCOMOMO IBERICO, ES
	STUDIECENTRUM VOOR KERNENERGIE, BE	NANOPHOS ANONIMI EMPORIKI ETAIRIA ANAPTIXIS KAI YPIRESION, EL
	NATIONAL TECHNICAL UNIV. OF ATHENS–NTUA, EL	NANOTECMARIN, DE
	TECHNISCHE UNIVERSITEIT DELFT, NL	IONFLY VACUUM AND PLASMA TECHNOLOGY SRL, IT
	AGENCIA ESTATAL CONSEJO SUPERIOR DEINVESTIGACIONES CIENTIFICAS, ES	SIKA TECHNOLOGY, CH
		RINA CONSULTING SPA, IT
	ANONYMI ETAIREIA VIOMICHANIKIS EREVNAS, TECHNOLOGIKIS ANAPTYXIS KAI ERGASTIRIAKON DOKIMON, EL	WISS, JANNEY, ELSTNER ASSOCIATES, INC, US
		LUCIANO HERNANDEZ, AR

NANORESTART

NANOmaterials for the REStoration of works of ART

Currently there is a lack of methodologies for the conservation of modern and contemporary artworks, many of which will not be accessible in very short time due to extremely fast degradation processes. The challenge of NANORESTART (NANOmaterials for the REStoration of works of ART) will be to address this issue within a new framework with respect to the state of the art of conservation science. NANORESTART is devoted to the development of nanomaterials to ensure long term protection and security of modern/contemporary cultural heritage, taking into account environmental and human risks, feasibility and materials costs. The market for conservation of this heritage is estimated at some €5 billion per year, and could increase by a significant factor in the next years due to the wider use of nanomaterials. The new tools and materials developed represent a breakthrough in cultural heritage and conservation science and will focus on: (i) tools for controlled cleaning, such as highly-retentive gels for the confinement of enzymes and nanostructured fluids based on green surfactants; (ii) the strengthening and protection of surfaces by using nanocontainers, nanoparticles and supramolecular systems/assemblies; (iii) nanostructured substrates and sensors for enhanced molecules detection; (iv) evaluation of the environmental impact and the development of security measures for long lasting conservation of cultural heritage. Within the project the industrial scalability of the developed materials is demonstrated.

NANORESTART gathers centres of excellence in the field of synthesis and characterisation of nanomaterials, world leading chemical Industries and SMEs operating in R&D, and International and European centres for conservation, education and museums. Such centres assess the new materials on modern/contemporary artefacts in urgent need of conservation, and disseminate the knowledge and the new nanomaterials among conservators on a worldwide perspective.

Project Reference: 646063	**Project Partners:**	UNIVERSITAT DE BARCELONA, ES
Website: http://www.nanorestart.eu/	CHALMERS TEKNISKA HOEGSKOLA AB, SE	THE BOARD OF TRUSTEES OF THE TATE GALLERY, UK
EU contribution: EUR 7 888 495	MIRABILE ANTONIO, FR	ASSOCIAZIONE ITALIANA PER LA RICERCA INDUSTRIALE – AIRI, IT
From: 2015 to 2018	NATIONALMUSEET, DK	THE ART INSTITUTE OF CHICAGO, US
Topic: NMP-21-2014	CONSIGLIO NAZIONALE DELLE RICERCHE, IT	MINISTERIO DE EDUCACION, CULTURA Y DEPORTE, ES
Project coordinator: CONSORZIO INTERUNIVERSITARIO PER LO SVILUPPO DEI SISTEMI A GRANDE INTERFASE, IT	UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK, IE	STICHTING HET RIJKSMUSEUM, NL
	MBN NANOMATERIALIA SPA, IT	UNIVERSITEIT VAN AMSTERDAM, NL
	KEMIJSKI INSTITUT, SI	UNIVERSIDADE FEDERAL DO RIO DE JANEIRO, BR
	CHEVALIER AURELIA, FR	ACCADEMIA DI BELLE ARTI DI BRERA, IT
	UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, BR	ZFB ZENTRUM FUR BUCHERHALTUNG GMBH, DE
	UNIVERSITA CA' FOSCARI VENEZIA, IT	UNIVERSITY COLLEGE LONDON, UK
	AKZO NOBEL PULP AND PERFORMANCE CHEMICALS AB, SE	
	COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES, FR	
	ARKEMA FRANCE, FR	
	UNIVERSIDAD DE SANTIAGO DE COMPOSTELA, ES	

NANO-CATHEDRAL

Nanomaterials for conservation of European architectural heritage developed by research on characteristic lithotypes

The project NANO-CATHEDRAL has developed, with a nano-metric scale approach, new materials, technologies and procedures for the conservation of deteriorated stones in monumental buildings and cathedrals and high value contemporary architecture, with a particular emphasis on the preservation of the originality and specificity of materials. The objective was to provide "key tools" for restoration and conservation:

- On representative lithotypes
- On European representative climatic areas
- With a time-scale/environmental approach
- With technology validated in relevant environment (industrial plant and monuments)
- Exploiting results also on modern stone made buildings

A general protocol has been defined for the identification of the petrographic and mineralogical features of the stone materials, the identification of the degradation patterns, the evaluation of the causes and mechanisms of alteration and degradation, including the correlations between the relevant state of decay and the actual microclimatic and air pollution conditions.
Moreover, innovative nano-materials have been developed suitable for:

- Surface consolidation: in this case water-based formulations based on nano-inorganic or nano-hybrid dispersions such as nano-silica, nano-titania, nano-hydroxyapatite, nano-calcite and nano-magnesia as well as their synergic combinations with organic and inorganic compounds have been considered.
- Surface protection: in this case, innovative composites have been developed consisting of polymers and nano-fillers. The use of hydrophobins, nano-assembled hydrofobic proteins extracted from fungi, and photocatalytic nano-particles have been considered.
- The project has contributed to the development of transnational cultural tourism and to the development of common European shared values and heritage, thus stimulating a greater sense of European identity.

Project Reference: 646178	**Project Partners:**	FUNDACION CATEDRAL SANTA MARIA, ES
Website: http://www.nanocathedral.eu/	OPERA DELLA PRIMAZIALE PISANA, IT	DIPUTACION FORAL DE ALAVA, ES
	WARRANT GROUP SRL, IT	TECNOLOGIA NAVARRA DE NANOPRODUCTOS SL, ES
EU contribution: EUR 6 321 335	MINISTERO DEI BENI E DELLE ATTIVITA CULTURALI E DEL TURISMO, IT	DOMBAUSEKRETARIAT ST STEPHAN, AT
From: 2015 to 2018	COLOROBBIA CONSULTING SRL, IT	UNIVERSITAT FUR ANGEWANDTE KUNST WIEN, ATTECHNISCHE UNIVERSITAET WIEN, AT
Topic: NMP-21-2014	CHEM-SPEC SRL, IT	
Project coordinator: CONSORZIO INTERUNIVERSITARIO NAZIONALE PER LA SCIENZA E TECNOLOGIA DEI MATERIALI, IT	METROPOLITANKAPITEL DER HOHEN DOMKIRCHE KOLN DOMBAUVERWALTUNG, DE	ARCHITECTENBUREAU BRESSERS, BE
	OTTO-FRIEDRICH-UNIVERSITAET BAMBERG, DE	ORGANIC WASTE SYSTEMS NV, BE
	KARLSRUHER INSTITUT FUER TECHNOLOGIE, DE	KOMMUNAL- OG MODERNISERINGSDEPARTEMENTET, NO
	WIEDEMANN GMBH, DE	

NEMOSINE

Innovative packaging solutions for storage and conservation of 20th century cultural heritage of artefacts based on cellulose derivate

A huge percentage of the recent European cultural heritage (CH) can be found in movies, photographies, posters and slides produced between 1895 and 1970 were made using cellulose derivates. More than 75 years of visual and audio memories are in serious danger to be lost due to the natural instability cellulose acetate (CA) and Cellulose nitrate (CN) materials.

These physical media have helped to preserve the cultural material that is a real witness of socio-cultural European evolution in the recent era. It encompasses the possibility to understand the development of new arts such as cinema, photography or graphic arts and also the preservation of the socio-cultural memories of citizens located in major and local museums worldwide.

Conservators consider two approaches when planning treatments to extend the useful lifetime of cultural materials: preventive or passive and active or interventive. But in case of cellulose derivates and other components of the movie or photos, once initiated, degradation cannot be prevented, reversed or stopped, but only inhibited or slowed. Inhibitive conservation of cellulose derivates can either involve the removal or reduction of factors causing degradation including light, oxygen, acids, fungus and relative humidity among others, as well as cost-sensitive processes such as freeze.

NEMOSINE improves the traditional storage solutions, such as freeze storage (below 5ºC), by developing an innovative package with the main goal of energy saving and extent conservation time. NEMOSINE will develop: i) High O2 barrier and Active packaging using non-odour additives, ii) Active acid adsorbers based on functionalized Metal Organic Framework (MOFs) integrated in innovative structures, iii) Gas detection sensors to monitoring AA, O2 & NO, iv) Multi-scale modelling to correlate degradation & sensors signals, v)Packaging with modular design to fulfil the technical & economical requirements of the different CH made by cellulose derivates.

Project Reference: 760801	Project Partners:	CONSERVATION BY DESIGN LIMITED, UK
Website: http://www.nemosineproject.eu/	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR	OESTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN, AT
EU contribution: EUR 7 293 911	INSTITUTO SUPERIOR TECNICO, PT	CULTURARTS GENERALITAT, ES
From: 2018 to 2022	NOVA ID FCT - ASSOCIACAO PARA A INOVACAO E DESENVOLVIMENTO DA FCT, PT	DEUTSCHES FILMINSTITUT - DIF EV, DE
Topic: NMBP-35-2017	CENTRE TECHNIQUE INDUSTRIEL DE LA PLASTURGIE ET DES COMPOSITES, FR	FRATELLI ALINARI ISTITUTO DI EDIZIONI ARTISTICHE-IDEA SPA, IT
Project coordinator: AIMPLAS - ASOCIACION DE INVESTIGACION DE MATERIALES PLASTICOS Y CONEXAS, ES	PROMETHEAN PARTICLES LTD, UK	VISUM LIMITED, IE
	AKUMPLAST AD, BG	NANOPHARMA AS, CZ
	BIOSENSOR S.R.L., IT	MODISPREM SA, ES

CLIMATE ACTION, ENVIRONMENT, RESOURCE EFFICIENCY AND RAW MATERIALS

CLIC

Circular models Leveraging Investments in Cultural heritage adaptive reuse

The characteristics of cultural heritage and landscape pose significant challenges for its governance. Long since cultural heritage is considered as a resource for local development strategies. But there are some contradictions. The sites recognized as cultural heritage are increasing; the costs for functional reuse are growing, while public resources available are becoming scarcer, and private actors are increasingly focused on the short time for payback. The consequence is that there is a growing risk that the decay of heritage will increase year by year because of lack of financial support. Cultural heritage is a non-renewable capital and it is linked to the economy because economics refers to the management of scarce and non-renewable resources; for these reasons, heritage conservation is also an economic choice.

The CLIC project addresses significant challenges of cultural heritage and landscape adaptive reuse. It progresses the agenda on heritage-led local sustainable development by developing flexible, transparent, integrated and inclusive tools to manage the change of cultural landscape, which are required to leverage the potential of cultural heritage for Europe. The investment gap in cultural heritage and landscape regeneration will be addressed by CLIC through careful evaluation of all costs, of ""complex values"" and impacts of adaptive reuse, selecting function(s) not only linked to tourism attractiveness, but also for the well-being improvement, providing critical evidence of wealth, jobs, social, cultural, environmental and economic returns on the investment.

The overarching goal of the CLIC trans-disciplinary research project is to identify evaluation tools to test, implement, validate and share innovative ""circular"" financing, business and governance models for systemic adaptive reuse of cultural heritage and landscape, demonstrating the economic, social, environmental convenience, in terms of long lasting economic, cultural and environmental wealth.

Project Reference: 776758	Project Partners:	FACILITYLIVE OPCO SRL, IT
Website: http://www.clicproject.eu/	UPPSALA UNIVERSITET, SE	VASTRA GOTALANDS LANS LANDSTING, SE
EU contribution: EUR 4 957 033	GROUPE ICHEC - ISC SAINT-LOUIS - ISFSC, BE	COMUNE DI SALERNO, IT
From: 2017 to 2020	UNIVERZA V NOVI GORICI, SI	UNIWERSYTET WARSZAWSKI, PL
Topic: SC5-22-2017	ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH), DE	GRAD RIJEKA-GRADSKO VIJECE, HR
Project coordinator: CONSIGLIO NAZIONALE DELLE RICERCHE, IT	UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION, UK	STICHTING PAKHUIS DE ZWIJGER, NL
	TECHNISCHE UNIVERSITEIT EINDHOVEN, NL	WIRTSCHAFTSUNIVERSITAT WIEN, AT
	UNIVERSITY COLLEGE LONDON, UK	

HERACLES

HEritage Resilience Against CLimate Events on Site

HERACLES main objective is to design, validate and promote responsive systems/solutions for effective resilience of CH against climate change effects, considering as a mandatory premise an holistic, multidisciplinary approach through the involvement of different expertise (end-users, industry/SMEs, scientists, conservators/restorators and social experts, decision, and policy makers). This will be operationally pursued with the development of a system exploiting an ICT platform able to collect and integrate multisource information in order to effectively provide complete and updated situational awareness and support decision for innovative measurements improving CH resilience, including new solutions for maintenance and conservation. The HERACLES effectiveness will be ensured by the design and validation of manageable methodologies also for the definition of operational procedures and guidelines for risk mitigation and management. It will be validated in two challenging test beds, key study cases for the climate change impact on European CH assets. The strength of HERACLES solutions is their flexibility in evaluating a big quantity of different information that can be changed and tailored to the specific CH assets needs, guaranteeing in that way a general applicability. In this context, a fundamental role will be played by end-users, which will be active part in the project activities. HERACLES system will be designed and developed by accounting for the economic sustainability and future acceptance by the market and for the social and economic impact for public and local communities while respecting the integrity of CH and the value it hold for communities. Effective technological transfer of HERACLES outcomes to large companies, SMEs and end users, suitable dissemination, communication, education and training activities are also organized to disseminate vision and progresses obtained to different communities, in a vision of wide audiences awareness.

Project Reference: 700395	**Project Partners:**	EUROPEAN MATERIALS RESEARCH SOCIETY, FR
Website: http://www.heracles-project.eu/	E-GEOS SPA, IT	FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL
	LEONARDO - SOCIETA PER AZIONI, IT	
EU contribution: EUR 6 564 313	THALES SA, FR	PANEPISTIMIO KRITIS, EL
From: 2016 to 2019	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V., DE	EPHORATE OF ANTIQUITIES OF HERAKLION, EL
Topic: DRS-11-2015	ARIA TECHNOLOGIES SA, FR	COMUNE DI GUBBIO, IT
Project Coordinator: CONSIGLIO NAZIONALE DELLE RICERCHE, IT	SISTEMA GMBH, AT	UNIVERSITA DEGLI STUDI DI PERUGIA, IT
	CVR S.R.L., IT	
	UNINOVA-INSTITUTO DE DESENVOLVIMENTO DE NOVAS TECNOLOGIAS-ASSOCIACAO, PT	
	THE INTERNATIONAL EMERGENCY MANAGEMENT SOCIETY AISBL, BE	

ILUCIDARE

International network for Leveraging sUccessful Cultural heritage Innovations and Diplomacy, cApacity building and awaREness raising

ILUCIDARE is a three-year project to promote and leverage cultural heritage (CH)-led innovation and diplomacy through the creation and activation of an international community of CH practitioners in Europe and beyond, while strongly contributing to the overall objectives of the communication "Towards an EU strategy for international cultural relations" (JOIN/2016/029) and EU international cooperation in research and innovation (COM(2012)497). ILUCIDARE refers to both "elucidare", aiming to provide a common definition of CH-led innovation and diplomacy, and "lucidare", aiming to raise awareness, provide assistance, leverage and upscale CH-led innovation and diplomacy on a global scale. ILUCIDARE opts to tie its activities to strong established networks rather than just creating a new isolated project with little or no impact. The project will enable the exchanges of best practices, knowledge transfer, skills development and cross-fertilisation within its global network through an extensive use of digital engagement strategies and tools as well as participatory activities including 2 focus groups and 2 co-creation ateliers, 3 high-level international conferences, 5 international competitions (including 4 ILUCIDARE special EU Prizes for Cultural Heritage / Europa Nostra awards), online training by means of a Massive Open Online Course (MOOC), 2 academic training courses, onsite capacity buildings in 11 locations in 8 countries in South-East Europe, South America, Middle East and Africa. The strong international component of ILUCIDARE activities will allow to foster intercultural dialogue and effectively improve EU external relations through cultural heritage diplomacy. Based on continuous dialogue and exchanges facilitated by a special appointed Community Manager, ILUCIDARE will act as an e-market for CH-led innovative solutions and will support spill-overs and sustainable development collaborations to better preserve and promote CH, especially where it is at risk.

Project Reference: 821394	**Project Partners:**	
Website: N/A	UNIVERSIDAD DE CUENCA, EC	
EU contribution: EUR 2 869 290	FONDACIONIT KOSOVAR TRASHEGIMIAKULTURORE PA KUFIJ, XK	
From: 2018 to 2021	FONDO ESPANOL PARA LA CONSERVACIONY RESTAURACION DE MONUMENTOS, ES	
Topic: SC5-19-2018	KEA EUROPEAN AFFAIRS, BE	
Project coordinator: KATHOLIEKE UNIVERSITEIT LEUVEN, BE	MIEDZYNARODOWE CENTRUM KULTURY W KRAKOWIE, PL	
	EUROPA NOSTRA, NL	
	INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM, BE	

OpenHeritage

Organizing, Promoting and ENabling HEritage Re-use through Inclusion, Technology, Access, Governance and Empowerment

OpenHeritage aims at developing and testing an inclusive governance model and a supporting toolbox for the adaptive re-use of cultural heritage assets. It builds on the role of communities and the possibility of empowering them in the redevelopment process based on the concepts of heritage community and participatory culture. The project operates with an open definition of heritage, not limited to listed assets but also involving those buildings, complexes, and spaces that have a symbolic or practical significance for local or trans-local heritage communities. Inclusiveness also means the incorporation of a coalition of stakeholders into the re-use and maintenance process, the integration of resources involving new financial and economic models, and working with the local social, environmental, administrative, and economic context of the heritage sites. Territorial integration is an essential element as well: the planning process goes beyond a building or a site to contribute to the transformation of wider areas.

OpenHeritage connects diverse cases across Europe, involving sixteen Observatory Cases (OCs), which are adaptive re-use projects that are studied and compared in-depth, and six Cooperative Heritage Labs (CHLs), on-going projects overseen by consortium partners, where it co-creates and tests its inclusive model. The cases are situated in a variety of urban, peri-urban, and natural environments, and include diverse heritage assets.

OpenHeritage will launch a website (Heritage Point) to provide a forum for engagement and support resource integration at the CHLs, and will create a database of macro- and micro-level research results, connecting systematically collected information on the regulatory framework all over Europe with current heritage re-use practices as analyzed in the OCs . Using the OCs and CHLs as starting points, OpenHeritage establishes a system of dissemination to support the uptake of innovation in adaptive heritage re-use.

Project Reference: 776766	**Project Partners:**	CENTER FOR URBAN HISTORY OF EAST CENTRAL EUROPE, UA
Website: https://openheritage.eu/	EUTROPIAN GMBH, AT UNIVERSITEIT GENT, BE UNIVERSITA DEGLI STUDI ROMA TRE, IT	LUISS LIBERA UNIVERSITA INTERNAZIONALE DEGLI STUDI SOCIALI GUIDO CARLI, IT
EU contribution: EUR 4 992 812,50	UNIVERSITY OF NEWCASTLE UPON TYNE, UK	PLATONIQ SISTEMA CULTURAL, ES
From: 2018 to 2022 **Topic:** SC5-22-2017	HUMBOLDT-UNIVERSITAET ZU BERLIN, DE	CAMARA MUNICIPAL DE LISBOA, PT
Project coordinator: VAROSKUTATAS (METROPOLITAN RESEARCHINSTITUTE) KFT, HU	KOZEP-EUROPAI EGYETEM, HU ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)*, DE	STIFTUNG TRIAS GEMEINNUTZINGE STIFTUNG FUR BODEN, OKOLOGIE UND WOHNEN, DE V.O.F. EURODITE, NL
	ODDZIAL WARSZAWSKI STOWARZYSZENIA ARCHITEKTOW POLSKICH, PL	TYNE AND WEAR BUILDING PRESERVATION TRUST LIMITED, UK

RIBuild

Robust Internal Thermal Insulation of Historic Buildings

RIBuild will strengthen the knowledge on how and under what conditions internal thermal insulation is to be implemented in historic buildings, without compromising their architectural and cultural values, with an acceptable safety level against deterioration and collapse of heavy external wall structures. The general objective of RIBuild is to develop effective, comprehensive decision guidelines to optimise the design and implementation of internal thermal insulation in historic buildings across the EU. RIBuild focuses on heavy external walls made of stone, brick and timber framing, as most historic buildings are made of these materials. The general objective is achieved through three main activities

- To obtain a thorough knowledge level to characterise the eligibility of the building for a deep internal thermal insulation renovation. This knowledge is obtained through screening of historic buildings, investigation of material properties and threshold values for failure

- To determine the conditions under which different internal insulation measures are reliable and affordable measures based on probabilistic modelling of the hygrothermal performance, the environmental impact and the cost/benefit

- To develop a set of comprehensive decision guidelines, which are demonstrated in a number of buildings. RIBuild addresses the most difficult retrofitting measure of historic buildings: internal thermal insulation. The adaption of knowledge developed by RIBuild contributes to sustainable historic buildings with improved energy efficiency implying an easier conversion of energy supply from inefficient fossil fuels to efficient renewable energy sources. RIBuild also assesses the hygrothermal performance of the building construction, thus no collateral damage occurs; in case of failure an easy roll back of the measures is possible. The guidelines developed in RIBuild strongly support the deep and holistic retrofitting approach which historic buildings face in the coming years.

Project Reference: 637268	**Project Partners:**	RISE RESEARCH INSTITUTES OF SWEDEN AB, SE
Website: http://ribuild.eu/	RIGAS TEHNISKA UNIVERSITATE, LV	HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE, CH
EU contribution: EUR 4 962 375	TECHNISCHE UNIVERSITAET DRESDEN, DE	INTRO FLEX APS, DK
From: 2015 to 2019	KATHOLIEKE UNIVERSITEIT LEUVEN, BE	ERIK MOLLER ARKITEKTER AS, DK
Topic: EE-03-2014	UNIVERSITA POLITECNICA DELLE MARCHE, IT	
Project coordinator: AALBORG UNIVERSITET, DK	DANMARKS TEKNISKE UNIVERSITET, DK	

ROCK

Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities

ROCK aims to develop an innovative, collaborative and systemic approach to effective regeneration and adaptive reuse strategies in historic city centres. By implementing a repertoire of successful heritage-led regeneration initiatives, it will test the replicability of a spatial approach and of successful models addressing the specific needs of historic city centres. ROCK will transfer the role models blueprint to the replicators, adopting a cross disciplinary mentoring and defining common protocols and implementation guidelines. ROCK will deliver new ways to access and experience Cultural Heritage [CH] ensuring environmental sound solutions, city branding, bottom-up participation via living labs, while increasing accessibility and safety in the involved areas. ICT sensors and tools will support the concrete application of the ROCK principles and the platform will enable new ways to collect and exchange data to facilitate networking, synergies and creation of CH related services. The added value is the combination of sustainable models, integrated site management plans and associated funding mechanisms encouraging PPP, based on successful financial schemes and promoting the creation of industry-driven stakeholders' ecosystems. A monitoring tool is set up from the beginning, running during three additional years after the project lifetime. Main expected impacts deal with the achievement of effective and shared policies able to: accelerate heritage led regeneration, improve accessibility and social cohesion, increase awareness and participation in local decision making and wider civic engagement, foster businesses and new employment opportunities. Involving 10 Urban authorities, 5 Universities, 3 networks of enterprises, 3 networks of cities and several companies, foundations and charities, ROCK is able to catalyse challenges and innovative pathways across EU and beyond, addressing CH as a production and competitiveness factor and a driver for sustainable growth.

Project Reference: 730280	Project Partners:	ATHENS DEVELOPEMENT AND DESTINATION MANAGEMENT AGENCY, EL
Website: www.rockproject.eu	ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA, IT	JULIE'S BICYCLE, UK
EU contribution: EUR 9 873 585	CAMARA MUNICIPAL DE LISBOA, PT	VIRTUALWARE 2007 SA, ES
From: 2017 to 2020	CITTA DI TORINO, IT	FONDAZIONE FITZCARRALDO, IT
Topic: SC5-21a-2016	COMMUNE DE LYON, FR	GREENBIZ GREEN BUSINESS SPAIN S.L., ES
Project coordinator: COMUNE DI BOLOGNA, IT	MUNICIPUL CLUJ-NAPOCA, RO	VILNIUS CITY MUNICIPALITY ADMINISTRATION, LT
	FILIALA TRANSILVANIA A ASOCIATIEI ROMANE PENTRU INDUSTRIA ELECTRONICA SI DE SOFTWARE, RO	VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS, LT
	UNIVERSITY OF YORK, UK	ATHENS SCHOOL OF FINE ARTS, EL
	EUROCITIES ASBL, BE	INSTITUTO DE CIENCIAS SOCIAIS DA UNIVERSIDADE DE LISBOA, PT
	ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH), DE	LIVERPOOL CITY COUNCIL, UK
	THE PRINCE'S REGENERATION TRUST, UK	GEMEENTE EINDHOVEN, NL
	TASO DESAROLLOS S.L., ES	CONFINDUSTRIA SERVIZI INNOVATIVI E TECNOLOGICI, IT
	CITY OF SKOPJE, MK	
	CORVALLIS S.P.A., IT	
	URBASOFIA SRL, RO	
	DFRC AG, CH	
	ACCIONA INFRAESTRUCTURAS S.A., ES	

RURITAGE

Rural regeneration through systemic heritage-led strategies

European rural areas embody outstanding examples of Cultural and Natural Heritage (CNH) that need not only to be safeguarded, but also promoted as a driver for competitiveness, sustainable and inclusive growth and development. RURITAGE establishes a new heritage-led rural regeneration paradigm able to turn rural areas in sustainable development demonstration laboratories, through the enhancement of their unique CNH potential. RURITAGE has identified 6 Systemic Innovation Areas (pilgrimages; sustainable local food production; migration; art and festivals; resilience; and integrated landscape management) which, integrated with cross-cutting themes, showcase heritage potential as a powerful engine for economic, social and environmental development of rural areas.

The knowledge built in 14 Role Models (RMs) and digested within the project, will be transferred to 6 Replicators (Rs) across Europe. Through a multilevel and multidirectional process of knowledge transfer, RMs will mentor and support the Replicators in the development and implementation of their strategies and, at the same time, will further increase their knowledge and capacities. A robust monitoring system will assist this process.

Local Rural Heritage Hubs, gathering stakeholders and civil society, will be settled in Rs to work as living labs where heritage-led rural regeneration strategies will be co-created and implemented, while in RMs they will reinforce the ownership of CNH.

Both RMs and Rs will also benefit of the RURITAGE Resources Ecosystem, a set of tools including, among others, a rural landscape mapping tool (RURITAGE Atlas) and a Replication Toolbox within an online and interoperable platform. These tools will foster knowledge building, providing evidence and supporting replication and up-scaling activities of the implemented heritage-led regeneration strategies and plans, contributing to mainstream heritage in Regional, National, European and global policies.

Project Reference: 776465	Project Partners:	ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)*, DE
Website: https://en.unesco.org/ruritage	CONSULTA EUROPA PROJECTS AND INNOVATION SL, ES	
EU contribution: EUR 9 975 651,25	FUNDACION TECNALIA RESEARCH & INNOVATION, ES	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA, IT
From: 2018 to 2022	FUNDACION CARTIF, ES	
Topic: SC5-21-2016-2017	UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION - UNESCO, FR	SAVONIA-AMMATTIKORKEAKOULU OY, FI
		POLITECNICO DI TORINO, IT
Project coordinator: ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA, IT	UNIVERSITY OF PLYMOUTH, UK	NORGES MILJO-OG BIOVITENSKAPLIGE UNIVERSITET, NO
	STOWARZYSZENIE CENTRUM ROZWIAZAN SYSTEMOWYCH, PL	
	BORGHI ITALIA TOUR NETWORK SRL, IT	AGENCE DE COOPERATION INTERREGIONALE - RESEAU CHEMINS DE SAINT-JACQUES DE COMPOSTELLE, FR
	INNOVATION AND MANAGEMENT CENTRE LIMITE, IE	
	ALMENDE B.V., NL	FEDERACION COLOMBIANA DE MUNICIPIOS, CO
	DISTRETTO AGROALIMENTARE REGIONALE SCRL, IT	
	VISEGRAD VAROS ONKORMANYZATA, HU	MAGMA GEOPARK AS, NO
	KULTURNO IZOBRAZEVALNO DRUSTVO KIBLA, SI	CA PROVENCE-ALPES-AGGLOMERATION, FR
	ZAVOD ZA KULTURO, TURIZEM IN PROMOCIJO GORNJA RADGONA, SI	EMI EPITESUGYI MINOSEGELLENORZO INNOVACIOS NONPROFIT KFT, HU
	GEO NATURPARK BERGSTRASSE-ODENWALDEV, DE	
		PIAM ONLUS ASTI, IT

	PANEPISTIMIO KRITIS, GR	MOUSEIO FISIKIS ISTORIAS APOLITHOMENOU DASOUS LESVOU, GR
	KATLA GEOPARK, IS	
	JUDETUL HARGHITA, RO	COMUNE DI APPIGNANO DEL TRONTO, IT
	ARBEITSGEMEINSCHAFT GEOPARK KARAWANKEN-KARAVANKE, AT	FUNDACION SANTA MARIA LA REAL DEL PATRIMONIO HISTORICO, ES
	IZMIR BUYUKSEHIR BELEDIYESI, TR	
	DE SURDURULEBILIR ENERJI VE INSAAT SANAYI TICARET LIMITED SIRKETI, TR	ASOCIATIA INSTITUTIO PRO EDUCATIONEM TRANSILVANIENSIS, RO
	DIRECCION DE BIBLIOTECAS ARCHIVOS Y MUSEOS, CL	AGRUPACION EMPRESARIAL INNOVADORA PARA LA CONSTRUCCION EFICIENTE, ES
	IZMIR INSTITUTE OF TECHNOLOGY, TR	

STORM

Safeguarding Cultural Heritage through Technical and Organizational Resources Management

Starting from previous research experiences and tangible outcomes, STORM proposes a set of novel predictive models and improved non-invasive and non-destructive methods of survey and diagnosis, for effective prediction of environmental changes and for revealing threats and conditions that could damage cultural heritage sites. Moreover, STORM will determine how different vulnerable materials, structures and buildings are affected by different extreme weather events together with risks associated to climatic conditions or natural hazards, offering improved, effective adaptation and mitigation strategies, systems and technologies. An integrated system featuring novel sensors (intra fluorescent and wireless acoustic sensors), legacy systems, state of the art platforms (including LiDAR and UAVs), as well as crowdsourcing techniques will be implemented, offering applications and services over an open cloud infrastructure.

An important result of STORM will be a cooperation platform for collaboratively collecting and enhancing knowledge, processes and methodologies on sustainable and effective safeguarding and management of European Cultural Heritage. The system will be capable of performing risk assessment on natural hazards taking into account environmental and anthropogenic risks, and of using Complex Events processing. Results will be tested in relevant case studies in five different countries: Italy, Greece, UK, Portugal and Turkey. The sites and consortium have been carefully selected so as to adequately represent the rich European Cultural Heritage, while associate partners that can assist with liaisons and links to other stakeholders and European sites are also included.
The project will be carried out by a multidisciplinary team providing all competences needed to assure the implementation of a functional and effective solution to support all the actors involved in the management and preservation of Cultural Heritage sites.

Project Reference: 700191	**Project Partners:**	THE UNIVERSITY OF SALFORD, UK
Website: http://www.storm-project.eu/	INOV INESC INOVACAO - INSTITUTO DE NOVAS TECNOLOGIAS, PT	NOVA CONSERVACAO - RESTAURO E CONSERVACAO DO PATRIMONIO ARTISTICO-CULTURAL LDA, PT
EU contribution: EUR 7 297 875	MINISTERO DELL'INTERNO, IT	
	FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL	TROIARESORT - INVESTIMENTOS TURÍSTICOS, S.A., PT
From: 2016 to 2019	TECHNOLOGICAL EDUCATIONAL INSTITUTE OF PIRAEUS, EL	DIRECAO GERAL DO PATRIMONIO CULTURAL, PT
Topic: DRS-11-2015	RESILTECH SRL, IT	
Project coordinator: ENGINEERING - INGEGNERIA INFORMATICA SPA, IT	SOPRINTENDENZA SPECIALE PER IL COLOSSEO IL MUSEO NAZIONALE ROMANO E L'AREA ARCHEOLOGICA DI ROMA, IT	MUNICIPIO DE GRANDOLA, PT
	UNIVERSITA DEGLI STUDI DELLA TUSCIA, IT	ZENTRALANSTALT FUR METEOROLOGIE UNDGEODYNAMIK, AT
	KPEOPLE LTD, UK	EPHORATE OF ANTIQUITIES OF RETHYMNO, EL
	UNIVERSITAET STUTTGART, DE	
	SPARTA TECHNOLOGIES LTD, UK	BOGAZICI UNIVERSITESI, TR
	MELLOR ARCHAEOLOGICAL TRUST, UK	

REFLECTIVE SOCIETIES: CULTURAL HERITAGE AND EUROPEAN IDENTITIES

ArchAIDE

Archaeological Automatic Interpretation and Documentation of cEramics

The objectives of ArchAIDE are to support the classification and interpretation work of archaeologists with innovative computer-based tools, able to provide the user with features for the semi-automatic description and matching of potsherds over the huge existing ceramic catalogues. Pottery classification is of fundamental importance for the comprehension and dating of the archaeological contexts, and for understanding production, trade flows and social interactions, but it requires complex skills and it is a very time consuming activity, both for researchers and professionals. This tool would revolutionise archaeologists habits, behaviours and expectations, would meet real user needs and generate economic benefits, reducing time and costs, would create societal benefits from cultural heritage, improving access, re-use and exploitation of the digital cultural heritage in a sustainable way.

These objectives will be achieved through the development of:
-       an as-automatic-as-possible procedure to transform the paper catalogues in a digital description, to be used as a data pool for search and retrieval process;
-       a tool (mainly designed for mobile devices) that will support archaeologists in recognising and classifying potsherds during excavation and post-excavation analysis, through an easy-to-use interface and efficient algorithms for characterization, search and retrieval of the visual/geometrical correspondences;
-       an automatic procedure to derive a complete potsherd's identity card by transforming the data collected into a formatted electronic document, printable or visual;
-       a web-based real-time data visualization to improve access to archaeological heritage and generate new understanding;
-       an open archive to allow the archival and re-use of archaeological data, transforming them into common heritage and permitting economic sustainability.
Those instruments will be tested and assessed on real-cases scenarios, paving the way to future exploitation.

Project Reference: 693548 **Website:** www.archaide.eu **EU contribution:** EUR 2 460 376 **From:** 2016 to 2019 **Topic:** REFLECTIVE-6-2015 **Project coordinator:** UNIVERSITA DI PISA, IT	**Project Partners:** BARAKA ARQUEOLOGOS S.L., ES CONSIGLIO NAZIONALE DELLE RICERCHE, IT ELEMENTS CENTRO DE GESTIO I DIFUSIO DE PATRIMONI CULTURAL, ES INERA SRL, IT TEL AVIV UNIVERSITY, IL UNIVERSITAET ZU KOELN, DE UNIVERSITAT DE BARCELONA, ES UNIVERSITY OF YORK, UK	

ARCHES

Accessible Resources for Cultural Heritage EcoSystems

The popularisation of digitisation techniques has boosted the generation of digital cultural heritage assets in recent years. However, such techniques should not be regarded as an end in and of themselves, but as a means for enabling European citizens to engage with cultural heritage more closely and in different ways.

ARCHES aims to create more inclusive cultural environments particularly for those with differences and difficulties associated with perception, memory, cognition and communication. It will achieve this through in-depth research analysis and the development of innovative applications, functionalities and experiences based on the reuse and redevelopment of the aforementioned digital resources.

Our participatory research methodology situates real user needs at the heart of an iterative design and implementation process, through their active involvement in 3 pilot exercises. This will also facilitate the validation of potential solutions in scenarios at 6 museums, as well as engagement with broader audiences (e.g. children, the elderly, and other potentially marginalised groups) and extension to other sectors, mainly education and tourism.

The online accessible software platform, applications for handheld devices and multisensory activities will form the basis of a technical approach that will exploit state of the art technologies – e.g. augmented reality, avatars, relief printers and models, context-sensitive tactile audio guides, metadata and advanced image processing techniques – to underpin the generation of a dynamic ecosystem. In this framework, museums will play an important role by adapting content and reinterpreting cultural heritage in manners most suitable for target groups.

Our interdisciplinary consortium – involving academia, SMEs, research centres and museums – will focus on ensuring widespread communication and exploitation, stimulating cross-border collaboration to address a challenge common across Europe.

Project Reference: 693229 **Website:** www.arches-project.eu **EU contribution:** EUR 3 399 249 **From:** 2016 to 2019 **Topic:** REFLECTIVE-6-2015 **Project coordinator:** TREELOGIC TELEMATICA Y LOGICA RACIONAL PARA LA EMPRESA EUROPEA SL, ES	**Project Partners:** CENTRO REGIONAL DE BELLAS ARTES DE OVIEDO, ES COPRIX MEDIA DOO BEOGRAD-STARI GRAD, RS FUNDACION COLECCION THYSSEN-BORNEMISZA, ES FUNDACION LAZARO GALDIANO, ES KHM_MUSEUMSVERBAND, AT NEUMULLER MORITZ, AT SIGN TIME GMBH, AT THE OPEN UNIVERSITY, UK THE WALLACE COLLECTION, UK UNIVERSITY OF BATH, UK VICTORIA AND ALBERT MUSEUM, UK VRVIS ZENTRUM FUR VIRTUAL REALITY UND VISUALISIERUNG FORSCHUNGS-GMBH, AT	

CHIEF

Cultural Heritage and Identities of Europe's Future

Today, the twinned ideas of respect towards minorities' rights and cultural diversity that have been projected as values derived from the European historical experience are facing well-documented challenges. These include: the current radicalisation of young people in Europe; processes questioning the meaningfulness of the European project; and the revival of tribal identities and separatism. These processes give cause to fundamentally rethink the idea of Europeanness as a culture of dialogue and mutual respect. CHIEF aims to build an effective dialogue between different stakeholders in order to facilitate a future of Europe based on more inclusive notions of cultural heritage and identity. The project is innovative in its approach to cultural literacy of young Europeans by privileging the importance of production and transition of cultural knowledge in both formal educational settings initiated from above, and a variety of informal human interactions. These informal interactions are often overlooked despite their strong influence on how knowledge about European culture is acquired by young people. The project proposes to explore them by building an inter-disciplinary, multi-sectoral and transnational partnership in nine countries in and outside the EU. Through its research activities and social interventions, CHIEF will have a substantial impact on policies and practices facilitating intercultural dialogue in Europe. It will contribute to understanding and enhancing cultural literacy for young people, resulting in greater appreciation of diversity. The project will lead to more effective use of European cultural heritage as a site of production, translation and exchange of heterogeneous cultural knowledge. Moreover, it will help to recognize existing innovative practices and develop a new organisational model to enhance cultural and inter-cultural competence of young Europeans. Finally, it will empower and bolster the innovative capacities of its beneficiaries.

Project Reference: 770464	**Project Partners:**	UNIVERZITA KOMENSKEHO V BRATISLAVE, SK
Website: http://chiefproject.eu/	DAUGAVPILS UNIVERSITATE, LV	
EU contribution: EUR 4 580 371,25	INSTITUT DRUSTVENIH ZNANOSTI IVO PILAR, HR	THE SAVITRIBAI PHULE PUNE UNIVERSITY, IN
	CRRC GEORGIA NON-ENTREPRENEURIAL (NON-COMMERCIAL), GE	HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN HAMBURG, DE
From: 2018 to 2021	MIMAR SINAN FINE ARTS UNIVERSITY, TR	
Topic: CULT-COOP-03-2017	UNIVERSIDAD POMPEU FABRA, ES	
Project coordinator: ASTON UNIVERSITY, UK	CULTURE COVENTRY, UK	

Cicerone

Creative Industries Cultural Economy Production Network

Creative Industries Cultural Economy pROduction NEtwork (CICERONE) provides policymakers with a unique and innovative perspective from which to understand the cultural and creative industries (CCIs). Previous analyses have mapped the location and distribution of the CCIs; CICERONE innovates by exploring the flows of products and ideas that generate the economic and cultural values in and of places, and which also account for the disparities between them. Moreover, CICERONE explores the evolving relationships between cultural and the economy. Place is central to this project; place as co-produced by networks: jobs, ideas, cultures and economies all come together in unique combinations in places, this is what makes them 'unique'. The variations in local capacities to respond to global forces determine the past, present and future of all territories. By using the global production network (GPN) approach we develop a comprehensive understanding of CCIs (in the form of industries, clusters and networks). Furthermore, CICERONE will translate this new research into a stakeholder network, and an observatory, whose designs are reflective of the network approach. These will themselves be part of European capacity building which will serve to strengthen CCIs' collective representation, empower sustainable co-creation, and spur local cultural resilience, jobs and economic activity. At its core, CICERONE provides an academic analysis harnessed to economic, cultural and social impacts in terms of local capacity building in, and across, places; as well as deepening our understanding of the inequalities and lack of diversity of social characteristic and economic employment opportunities that characterises the CCIs.

Project Reference: 822778	**Project Partners:**	KEA EUROPEAN AFFAIRS, BE
Website: N/A	FONDATSIYA OBSERVATORIYA PO IKONOMIKA NA KULTURATA, BG	UNIVERSITAT WIEN, AT
	UNIVERSITA DEGLI STUDI DI BARI ALDO MORO, IT	CITY UNIVERSITY OF LONDON, UK
EU contribution: EUR 2 999 439,96		
From: 2019 to 2023	STOCKHOLMS UNIVERSITET, SE	
Topic: TRANSFORMATIONS-6-018	UNIVERSITAT DE BARCELONA, ES	
Project coordinator: UNIVERSITEIT VAN AMSTERDAM, NL	SWPS UNIWERSYTET HUMANISTYCZNOSPOLECZNY, PL	

CoHERE

Critical Heritages: performing and representing identities in Europe

CoHERE explores the ways in which identities in Europe are constructed through heritage representations and performances that connect to ideas of place, history, tradition and belonging. The research identifies existing heritage practices and discourses in Europe. It also identifies means to sustain and transmit European heritages that are likely to contribute to the evolution of inclusive, communitarian identities and counteract disaffection with, and division within, the EU. A number of modes of representation and performance are explored in the project, from cultural policy, museum display, heritage interpretation, school curricula and political discourse to music and dance performances, food and cuisine, rituals and protest. Across an experienced, multidisciplinary consortium we take various theoretical and methodological approaches to these. Relevance to the work programme is ensured through key approaches, which are: 1) the relational study of productions and experiences of heritage at institutional, social and personal levels, including research into people's activities and attitudes; 2) research by practice and the provision of public-facing dissemination activities; and 3) the critically-informed development of instruments (e.g. models for policy, curricula, museum and heritage practice) intended to promote reflection on and valorisation of European heritages and to engender socially-inclusive attitudes. The project is multidisciplinary, including museum, heritage and memory studies, cultural history, education, musicology, ethnology, political science, archaeology, ethnolinguistics and digital interaction design. The consortium comprises 12 partners over 9 countries, including universities, an SME, two museums and a cultural network. The research covers diverse European territories and realities comparatively and in depth.

Project Reference: 693289	**Project Partners:**	ISTANBUL BILGI UNIVERSITESI, TR
Website: https://research.ncl.ac.uk/cohere/	AARHUS UNIVERSITET, DK	
	ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA, IT	LATVIJAS KULTURAS AKADEMIJA, LV
EU contribution: EUR 2 499 651,75	COPENHAGEN INSTITUTE OF INTERACTION DESIGN, DK	MUZEUM HISTORII ZYDOW POLSKICH, PL
From: 2016 to 2019		
Topic: REFLECTIVE-2-2015	ETHNIKO KAI KAPODISTRIAKO PANEPISTIMIO ATHINON, EL	STICHTING NATIONAAL MUSEUM VAN WERELDCULTUREN, NL
Project coordinator: UNIVERSITY OF NEWCASTLE UPON TYNE, UK	EUROPEES NETWERK CULTURELE CENTRA IVZW, BE	UNIVERSITEIT VAN AMSTERDAM, NL
	HERIOT-WATT UNIVERSITY, UK	

COURAGE

Cultural Opposition: Understanding the Cultural Heritage of Dissent in the Former Socialist Countries

The project proposes both to create an electronic registry of representative online and offline, private and public collections of cultural opposition in all former socialist countries in Europe and to study the origins, uses and changing roles of these collections in their social, political and cultural contexts. We seek to further an understanding of how these (private and public, alternative and mainstream) collections work, what functions they serve in their respective societies, and how they represent their holdings to the public. The project will examine the legal and political circumstances that determined the collections before 1989 and the conditions that shape them in the post-socialist period. The analyses of the collections will identify various types of cultural opposition.

Objectives include: 1. an online registry and a transnational database of collections in the original languages and English that will be accessible to European archival platforms and networks; 2. descriptions of and guides to the collections to enhance the quality of research and provide guidance on the role of the EU in this respect; 3. country reports on the collections and proposals concerning methods of preserving cultural heritage, and a handbook on various types of cultural opposition represented by the collections; 4. online curriculum development and digital content for educational purposes; 5. a documentary film festival, traveling and online exhibitions and local media events based on selected collections; 6. a set of recommendations concerning how to exhibit the cultural opposition movements of former socialist countries for the House of European History.

This project will highlight the positive aspects of the former cultural opposition movements, such as democratic participation, autonomy and cultural plurality, and will remind us of an important pan-European truth: that civic courage can produce genuine cultural values even under authoritarian rule.

| Project Reference:
692919

Website:
http://cultural-opposition.eu/

EU contribution:
EUR 2 484 917,50

From: 2016 to 2019

Topic: REFLECTIVE-4-2015

Project coordinator:
MAGYAR TUDOMANYOS AKADEMIA BOLCSESZETTUDOMANYI KUTATOKOZPONT, HU | Project Partners:

HRVATSKI INSTITUT ZA POVIJEST, HR

INSTYTUT FILOZOFII I SOCJOLOGII POLSKIEJ AKADEMII NAUK, PL

LIETUVOS ISTORIJOS INSTITUTAS, LT

MAGYAR TUDOMANYOS AKADEMIA SZAMITASTECHNIKAI ES AUTOMATIZALASI KUTATOINTEZET, HU

MAGYAR TUDOMANYOS AKADEMIA TARSADALOMTUDO MANYI KUTATOKOZPONT, HU

STIFTUNG ZUR ERFORSCHUNG VON OST- UND SUEDOSTEUROPA, DE | UNIVERZITA KOMENSKEHO V BRATISLAVE, SK

UNIVERZITA KARLOVA V PRAZE, CZ

UNIVERSITATEA DIN BUCURESTI, RO

THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN, IE

THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD, UK |

CROSSCULT

CrossCult: Empowering reuse of digital cultural heritage in context-aware crosscuts of European history

CROSSCULT aims to make reflective history a reality in the European cultural context, by enabling the re-interpretation of European (hi)stories through cross-border interconnections among cultural digital resources, citizen viewpoints and physical venues. The project has two main goals. The first goal is to lower cultural EU barriers and create unique cross-border perspectives, by connecting existing digital historical resources and by creating new ones through the participation of the public. The second goal is to provide long-lasting experiences of social learning and entertainment that will help towards the better understanding and re-interpretation of European history. To achieve these goals, CROSSCULT will use cutting-edge technology to connect existing digital cultural assets and to combine them with interactive experiences that all together are intended to increase retention, stimulate reflection and help European citizens appreciate their past and present in a holistic manner. CROSSCULT will be implemented on 4 real-world flagship pilots involving a total of 8 sites across Europe. It will be realized through the participation of 11 partners and 14 associate partners including computer scientists, social sciences and humanity researchers, historians and private companies, from 7 European countries. The project will ensure continuous stakeholder involvement through a Living Lab and it will be supported by a concrete business plan. CROSSCULT is directly related to the work program since, on the one hand it re-purposes the use of digital cultural assets to stimulate a new shared culture of European history, one that moves from silos to unification, and on the other hand it boosts the development of new businesses that exploit the rich European digital cultural heritage.

Project Reference: 693150	**Project Partners:**	THE NATIONAL GALLERY, UK
Website: http://www.crosscult.eu	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR	UNIVERSIDAD DE VIGO, ES
EU contribution: EUR 3 503 358	CENTRE VIRTUEL DE LA CONNAISSANCE SUR L'EUROPE, LU	UNIVERSITA DEGLI STUDI DI PADOVA, IT
From: 2016 to 2019	GVAM GUIAS INTERACTIVAS SL, ES	UNIVERSITA TA MALTA, MT
Topic: REFLECTIVE-6-2015	INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, FR	UNIVERSITE DE LORRAINE, FR
Project coordinator: LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY, LU	TECHNOLOGIKO EKPAIDEFTIKO IDRYMA ATHINAS, EL	UNIVERSITY COLLEGE LONDON, UK
		UNIVERSITY OF PELOPONNESE, EL

CULTURALBASE

Social Platform on Cultural Heritage and European Identities

The CulturalBase social platform has the objective to identify and analyse some of the main debates and controversies around culture, in particular in relation to Heritage and European Identities.

The specific objectives of the project:

- To make an extensive analysis of the research literatures and policy programmes in the general field of cultural heritage and European identities.
- To identify main research issues and policy programmes in this field and to contrast between the kind of research done and the policies developed.
- To produce general overviews on the research priorities and opportunities in relation with cultural heritage and European identities from three basic analytic perspectives: cultural memory, cultural inclusion and cultural creativity.
- To develop a shared view within the social platform on the most important and policy relevant research issues in this field for Europe in the coming years and the best way to address them.
- To produce strategic research agendas on cultural heritage and European identities from the three aforementioned analytic perspectives stemming from the shared views.
- To produce general policy guidelines in this domain from these same perspectives, especially in relation with information systems and research policy.

Project Reference: 649454 **Website:** http://culturalbase.eu/ **EU contribution:** EUR 1 039 266 **From:** 2015 to 2017 **Topic:** REFLECTIVE-9-2014 **Project coordinator:** UNIVERSITAT DE BARCELONA, ES	**Project Partners:** EUROPEAN UNIVERSITY INSTITUTE, IT FUNDACIO INTERARTS PER A LA COOPERACIO CULTURAL INTERNACIONAL, ES KOZEP-EUROPAI EGYETEM, HU UNIVERSITE PARIS I PANTHEON-SORBONNE, FR UNIVERSITY OF GLASGOW, UK UNIVERSITY OF SUSSEX, UK	

CultureLabs

Culture Labs: recipes for social innovation

The proposal's central concept is CultureLabs, an open and evolving ICT-empowered infrastructure which comprises a rich variety of resources including guidelines, methodologies, digital tools, existing community engagement projects, as well as novel ideas and approaches that can facilitate social innovation in culture. The infrastructure is addressed to both institutional stakeholders and community members to make use of existing shared, and in many cases commonly created, resources, according to their missions and needs. Different resources, the "ingredients", can be combined in various ways to form a "recipe" that describes how to carry out a participatory project to address the needs of a specific target audience. The primary focus will be on approaches that build positive awareness about communities' own heritage and memories, and engage their members as bearers and producers of culture. CultureLabs' case studies focus on different immigrants communities (e.g. refugees, second generation immigrants, female immigrants etc). CultureLabs toolkits and infrastructure are reusable and extensible, and its ingredients can be easily combined and adjusted to meet the needs of different stakeholders and target groups. At least 20 concrete recipes will be designed through the collaboration between different stakeholders, including museums, civil organisations, and policy makers. Four of these recipes will be implemented and evaluated as pilots in three different countries. Research outcomes and the empirical evidence gained from the project's activities, including the recipes' design and implementation, will be consolidated into general-purpose methodological guidelines and best practices that can be adopted by any stakeholder who wishes to organise participatory approaches to CH with a social impact.

Project Reference:
770158

Website:
 https://culture-labs.eu/

EU contribution:
EUR 2 492 380

From: 2018 to 2021

Topic: CULT-COOP-06-2017

Project coordinator:
INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS, GR

Project Partners:

SINGULARLOGIC ANONYMI ETAIREIA PLIROFORIAKON SYSTIMATON KAI EFARMOGON PLIROFORIKIS, GR

COOPERATIVA SOCIALE COOSS MARCHE ONLUS SOCIETA COOPERATIVA PER AZIONI, IT

MUSEOVIRASTO * NATIONAL BOARD OF ANTIQUITIES, FI

NATIONAL MUSEUM OF LABOUR HISTORY, UK

PLATONIQ SISTEMA CULTURAL, ES

SHEFFIELD HALLAM UNIVERSITY, UK

FONDAZIONE SISTEMA TOSCANA, IT

EUROPAISCHES FORUM FUER MIGRATIONSSTUDIEN EV, DE

DETECt

Detecting Transcultural Identity in European Popular Crime Narratives

DETECt -Detecting Transcultural Identity in European Popular Crime Narratives addresses the formation of European cultural identity as a continuing process of transformation fostered by the mobility of people, products and representations across the continent. Because of the extraordinary mobility of its products, popular culture plays a decisive role in circulating representations that constitute a shared cultural asset for large sectors of the European society. The project examines examples of crime fiction, film and TV dramas from 1989 to present, to learn how mobility strategies such as co-production, serialization, translation, adaptation, distribution, and more, have influenced the transnational dissemination of European popular culture. It also investigates how the treatment of specific 'mobile signifiers' – including representations of gender, ethnic and class identities – affect the ability of European narratives to migrate outside their place of origin, and be appropriated elsewhere in different and variegated ways. Researching the contemporary history of the crime genre in Europe, DETECt aims to identify the practices of production, distribution and consumption that are best suited to facilitate the emergence of engaging representations of Europe's enormously rich, plural and cross-cultural identity.

The knowledge acquired through a detailed research programme will be used in cultural, learning and public engagement initiatives designed to prompt the elaboration of new transnational formats for the European creative industries. These activities will profit from a set of experimental research and learning resources and innovative collaborative tools, aggregated and organized on DETECt Web portal. A range of activities will be addressed to the general public. In particular, the development of a Web mobile app tools will allow users to contribute to the creation of a collaborative atlas of European crime narratives.

Project Reference: 770151	Project Partners:	LINK CAMPUS UNIVERSITY, IT
Website: http://www.detect-project.eu/	AALBORG UNIVERSITET, DK	MISO FILMS APS, DK
	AARHUS UNIVERSITET, DK	PANEPISTIMIO IOANNINON, GR
EU contribution: EUR 2 518 443.75	UNIVERSITE PARIS NANTERRE, FR	UMEA UNIVERSITET, SE
From: 2018 to 2021	TV 2 DENMARK AS, DK	FONDEN VISIT AARHUS, DK
	KATHOLIEKE UNIVERSITEIT LEUVEN, BE	BIBLIOCITE, FR
Topic: CULT-COOP-04-2017	UNIVERSITATEA DIN BUCURESTI, RO	FREIE UNIVERSITAET BERLIN, DE
Project coordinator: ALMA MATER STUDIORUM – UNIVERSITA DI BOLOGNA, IT	THE QUEEN'S UNIVERSITY OF BELFAST, UK	DEBRECENI EGYETEM, HU
	UNIVERSITE DE LIMOGES, FR	
	DEUTSCHE FILM- UND FERNSEHAKADEMIE BERLIN GMBH, DE	

DIALLS

Dialogue and Argumentation for cultural Literacy Learning in Schools

DIALLS is a three year project with three objectives. First, it will develop an understanding of young people's cultural literacy in formal education through the teaching of dialogue and argumentation as a means to understand European identities and cultures. This will be achieved by the creation and implementation of a cultural literacy learning programme where students respond to and produce multimodal texts reflecting European heritages with the promotion of tolerance, inclusion and empathy as core cultural literacy dispositions. Second, the project will provide comprehensive guidance for the development of cultural literacy in schools through the creation and evaluation of a scale of progression for cultural literacy learning as manifested in students' interactions and produced artefacts. Finally, DIALLS will promote the emergence of young people's cultural identities in a student-authored manifesto for cultural literacy and a virtual gallery of their cultural artefacts. We will conduct analyses of students' class-based and online interactions, mapping the development of dialogue and argumentation skills to create an open access multilingual data corpus. Cross-comparative analyses of classrooms in seven countries will include analysis of gender, age, ethnicity and socio-economic factors. DIALLS is directly relevant to the call's work programme as it addresses the role of formal education in supporting the acquisition of the knowledge, skills and competences needed for effective intercultural dialogue and mutual understanding. The novelty of our proposal lies in the intersection of cultural literacy, multimodality, dialogue and argumentation, and through the use of face-to-face and online learning environments where students can share their perspectives as they make sense of Europe and its different cultures. Our innovative teaching and assessment tools will guide teachers in their development of a dialogic pedagogy for cultural literacy in tomorrow's Europe.

Project Reference: 770045 **Website:** https://dialls2020.eu/ **EU contribution:** EUR 4 373 308,75 **From:** 2018 to 2021 **Topic:** CULT-COOP-03-2017 **Project coordinator:** THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE, UK	**Project Partners:** UNIVERSIDADE NOVA DE LISBOA, PT CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR JYVASKYLAN YLIOPISTO, FI WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER, DE VILNIAUS UNIVERSITETAS, LT UNIVERSITAT DE BARCELONA, ES EDEX – EDUCATIONAL EXCELLENCE COORPORATION LIMITED, CY THE HEBREW UNIVERSITY OF JERUSALEM, IL	

DigiArt

The Internet Of Historical Things And Building New 3D Cultural Worlds

DigiArt seeks to provide a new, cost efficient solution to the capture, processing and display of cultural artefacts. It offers innovative 3D capture systems and methodologies, including aerial capture via drones, automatic registration and modelling techniques to speed up post-capture processing (which is a major bottleneck), semantic image analysis to extract features from digital 3D representations, a "story telling engine" offering a pathway to a deeper understanding of art, and also augmented/virtual reality technologies offering advanced abilities for viewing, or interacting with the 3D models.

The 3D data captured by the scanners and drones, using techniques such as laser detection and ranging (LIDAR), are processed through robust features that cope with imperfect data. Semantic analysis by automatic feature extraction is used to form hyper-links between artefacts. These links are employed to connect the artefacts in what the project terms "the internet of historical things", available anywhere, at any time, on any web-enabled device. The contextual view of art is very much enhanced by the "story telling engine" that is developed within the project. The system presents the artefact, linked to its context, in an immersive display with virtual and/or with augmented reality. Linkages and information are superimposed over the view of the item itself.

The major output of the project is the toolset that will be used by museums to create such a revolutionary way of viewing and experiencing artefacts. These tools leverage the interdisciplinary skill sets of the partners to cover the complete process, namely data capture, data processing, story building, 3D visualization and 3D interaction, offering new pathways to deeper understanding of European culture. Via its three demonstration activities, the project establishes the viability of the approach in three different museum settings, offering a range of artefacts posing different challenges to the system.

Project Reference: 665066	**Project Partners:**	
Website: http://digiart-project.eu	ARCHEOLOGIE ANDENNAISE, BE	
EU contribution: EUR 2 456 550	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR	
From: 2015 to 2018	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS, EL	
Topic: REFLECTIVE-7-2014	HELLENIC MINISTRY OF CULTURE, EDUCATION AND RELIGIOUS AFFAIRS, EL	
Project coordinator: LIVERPOOL JOHN MOORES UNIVERSITY, UK	PIX4D SA, CH	
	UNIVERSITE DE NICE SOPHIA ANTIPOLIS, FR	
	VULCANUAV LIMITED, UK	

DISCE

Developing Inclusive & Sustainable Creative Economies

The DISCE (Developing Inclusive & Sustainable Creative Economies) project is set to improve and enhance the growth, inclusivity and sustainability of the cultural and creative industries (CCIs) in the EU. Overall, the ambitious objectives of DISCE are: i) to support the development patterns of CCIs within the EU through research on new business models and inclusive growth; and ii) to re-shape understanding of what 'inclusive and sustainable growth' consists of in this context, shifting the CCIs (and CCIs policy) towards strategic goals of 'cultural development' that encompass both GDP and human flourishing. DISCE is an interdisciplinary, mixed-methods project that builds on three pillars: 1) Robust statistical analyses, mapping and development of new statistical indices for a better understanding of the inclusive and sustainable development of CCIs in Europe; 2) In-depth case studies developing rich findings and nuanced understanding of the Creative Economies and their ecologies; and 3) Active co-creation and interaction with stakeholders to validate the policy relevance of the project, as well as the policy outcomes and achieve long-term impact and sustainability. DISCE serves all the beneficiaries relevant research results, which will help and support stakeholders to fill existing information gaps in daily policy and decision-making processes. DISCE will bring out recommendations for actors how to react, function and decide in specific situations to promote inclusive growth and progress on the sustainable development in the field of CCIs. The DISCE Consortium has six partners: University of Turku (UTU) as the Coordinator, Kings College London (KCL), Social Science Area of the Gran Sasso Science Institute (GSSI), Stockholm School of Economics in Riga (SSE) as 'Research Partners' and two 'Stakeholder Partners' Culture & Media Agency aisbl (CUMEDIAE) and Trans European Halles (TEH) both with wide networks in the field of CCIs.

Project Reference: 645612 **Website:** N/A **EU contribution:** EUR 2 940 495 **From:** 2019 to 2021 **Topic:** TRANSFORMATIONS-06-2018 **Project coordinator:** TURUN YLIOPISTO, FI	**Project Partners:** KING'S COLLEGE LONDON, UK GRAN SASSO SCIENCE INSTITUTE, IT STOCKHOLM SCHOOL OF ECONOMICS IN RIGA SIA, LV CULTURE & MEDIA AGENCY EUROPE, BE TRANS EUROPE HALLES, SE	

ECHOES

European Colonial Heritage Modalities in Entangled Cities

ECHOES addresses a pressing dilemma at the heart of contemporary Europe: the fact that while the history of empires and colonialism undoubtedly constitutes a shared European past, this past remains strangely silent in official narratives about Europe's 'heritage'; those things it values enough to save for future generations. We argue that the EU urgently needs not just to acknowledge this dilemma but to reflexively and progressively include it at the heart of its identity. 'Europeanising' difficult colonial heritage is becoming all the more necessary today as the EU operates in increasingly global contexts, relationships and geographies, where its ongoing 'deficit' towards accepting colonialism as a part of European history collides with the palpable 'surplus' of colonial memory in much of the outside world with which Europe grows ever more entangled. ECHOES therefore proposes that the memory of colonialism needs to find its place in contemporary European heritage debates. Drawing on the proven expertise of a team of leading international scholars, ECHOES will show that it is through exploring the creative activities and engagements with colonial legacy in European and non-European cities still imbued with manifold traces of the colonial past that one can identify new forms of progressive heritage practice. Through a facilitation of horizontal science diplomacy between cities and the creation of new links and partnerships with artists, museums and civic groups, ECHOES will foster new future-oriented forms of intercultural dialogues based on de-colonial understandings of colonial relations. When lifted to a European level this science diplomacy will contribute to a rethinking of existing tensions between Europe and its global neighbours.

Project Reference: 770248	Project Partners:	
Website: http://projectechoes.eu/	AARHUS UNIVERSITET, DK	
	UNIVERSITEIT VAN AMSTERDAM, NL	
EU contribution: EUR 2 461 890	UNIWERSYTET WARSZAWSKI, PO	
From: 2018 to 2021		
Topic: ENG-GLOBALLY-01-2017	CENTRO DE ESTUDOS SOCIAIS, PT	
Project coordinator: UNIVERSITY OF HULL, UK	UNIVERSITE RENNES II, FR	

EL-CSID

European Leadership in Cultural, Science and Innovation Diplomacy

The European Union has made a major start articulating the relevance of cultural and science for its external relations. What has yet to be done, however, is to make explicit the assumptions underpinning much of this work on cultural and science diplomacy and to codify and articulate it as part of a systematic and strategic approach to understanding the direction of travel of science and cultural diplomacy that locates developments in these fields within the evolving global and EU external relations context. EL-CSID will do this, with the added ambition to identify how the Union and its member states might collectively and individually develop a good institutional and strategic policy environment for extra-regional culture and science diplomacy. Hence, the over-arching objectives of this proposed project are threefold:

1) To detail and analyse the manner in which the EU operates in the domains of cultural and science diplomacy in the current era; comparing its bilateral and multilateral cultural and science ties between states, regions, and public and private international organisations.

2) To examine the degree to which cultural and science diplomacy can enhance the interests of the EU in the contemporary world order and to identify:

(a) How cultural and science diplomacy can contribute to Europe's standing as an international actor;

(b) Opportunities offered by enhanced coordination and collaboration amongst the EU, its members and their extra-European partners; and

(c) Constraints posed by economic and socio-political factors affecting the evolving operating environments of both science and cultural diplomacy.

3) To identify a series of mechanisms/platforms to raise awareness among relevant stakeholders of the importance of science and culture as vehicles for enhancing the EU's external relations.

The research will generate both scholarly work and policy-oriented output which will be disseminated through an extensive and targeted dissemination programme.

Project Reference: 693799	**Project Partners:**	
Website: https://www.el-csid.eu/	THE UNIVERSITY OF WARWICK, UK	
EU contribution: EUR 2 362 500	WISSENSCHAFTSZENTRUM BERLIN FUR SOZIALFORSCHUNG GGMBH, DE	
From: 2016 to 2019	EVRO-SREDOZEMSKA UNIVERZA, SI	
Topic: INT-11-2015	CEDS EGITIM VE DANISMANLIK HIZMETLERI AS, TR	
Project coordinator: VRIJE UNIVERSITEIT BRUSSEL, BE	THE JOINT INSTITUTE FOR INNOVATION POLICY AISBL, BE	
	UNITED NATIONS UNIVERSITY – COMPARATIVE REGIONAL INTEGRATION STUDIES, BE	
	NATIONAL UNIVERSITY OF SINGAPORE PUBLIC COMPANY LIMITED BY GUARANTEE, SG	
	NAZARBAYEV UNIVERSITY, KZ	

EMOTIVE

Emotive Virtual cultural Experiences through personalized storytelling

Storytelling applies to nearly everything we do. Everybody uses stories, from educators to marketers and from politicians to journalists to inform, persuade, entertain, motivate or inspire. In the cultural heritage sector, however, narrative tends to be used narrowly, as a method to communicate to the public the findings and research conducted by the domain experts of a cultural site or collection.

The principal objective of the EMOTIVE project is to research, design, develop and evaluate methods and tools that can support the cultural and creative industries in creating Virtual Museums which draw on the power of 'emotive storytelling'. This means storytelling that can engage visitors, trigger their emotions, connect them to other people around the world, and enhance their understanding, imagination and, ultimately, their experience of cultural sites and content. EMOTIVE will do this by providing the means to authors of cultural products to create high-quality, interactive, personalized digital stories.

The EMOTIVE project targets two main groups of users:

1. Authors: members of the cultural and creative industries in charge of creating interactive cultural experiences (i.e., interactive stories) and making them available to the visitors.
2. Visitors: people experiencing the cultural site through a "World" created with the EMOTIVE Authoring System. They join in the available experiences when entering the site or when remotely connecting to the site's Virtual Museum.

The project results will be evaluated and validated in major cultural sites in Europe through an extensive network of cultural organizations and creative industries that have expressed their interest to the project.

| Project Reference:
727188

Website:
https://www.emotiveproject.eu/

EU contribution:
EUR 2 643 447.50

From: 2016 to 2019

Topic: CULT-COOP-08-2016

Project coordinator:
EXUS SOFTWARE LTD, UK | Project Partners:

ATHINA-EREVNITIKO KENTRO KAINOTOMIAS STIS TECHNOLOGIES TIS PLIROFORIAS, TON EPIKOINONION KAI TIS GNOSIS, GR

DIGINEXT, FR

NOHO LIMITED, IE

UNIVERSITY OF YORK, UK

UNIVERSITY OF GLASGOW, UK | INSTITUT NATIONAL DE RECHERCHE ENINFORMMATIQUE ET AUTOMATIQUE, FR

CONSIGLIO NAZIONALE DELLE RICERCHE, IT |

EU-LAC-MUSEUMS

Museums and Community: Concepts, Experiences, and Sustainability in Europe, Latin America and the Caribbean

Virtual "The EU-LAC-MUSEUMS project directly meets the challenge of fostering EU-CELAC relations by studying the close connections between Europe and Latin America and the Caribbean (LAC) in the field of community museology.

To address this challenge, EU-LAC-MUSEUMS assembles a team of leading academics, museum professionals and policy makers elected by the European and LAC Regional Alliances of the International Council of Museums (ICOM) (www.icom.museum). Together, we are committed to exploring the cultural, scientific and social dimensions of EU-LAC relations with a view to "supporting the process of EU-CELAC cooperation outlined by the EU-CELAC Action Plan 2013-2015 in defining a common vision for the years to come". Through a series of thematic work packages we will pursue the theme of "Museums and Community: Concepts, Experiences, and Sustainability in Europe, Latin America and the Caribbean". A good deal of research has been carried out into this subject at local, national, and regional levels in both EU and LAC, but a concerted bi-regional investigation is yet to appear. EU-LAC-MUSEUMS will overcome this gap in knowledge by creating parity of esteem and sustainable dialogue and co-operation between academia, museums and communities in each region. It will achieve this goal by pursuing work packages dealing with the cross cutting societal challenges of: a) ""Technology and Innovation for Bi-Regional Integration""; b) ""Museum Education for Social Inclusion and Cohesion""; c) ""Investment and Entrepreneurship for Sustainable Museums", and d) "Exhibiting Migration and Gender". In so doing, we will push forward the agenda of the EU-CELAC Action Plan in museum practice and theory."

Project Reference: 693669	Project Partners:	
Website: https://eulacmuseums.net/index.php	DIRECAO GERAL DO PATRIMONIO CULTURAL, PT	
	CONSEIL INTERNATIONAL MUSEES, FR	
EU contribution: EUR 2 422 406.50	THE UNIVERSITY OF THE WEST INDIES U WI*, JM	
From: 2016 to 2020	PONTIFICIA UNIVERSIDAD CATOLICA DEL PERU, PE	
Topic: INT-12-2015	UNIVERSITAT DE VALENCIA, ES	
Project coordinator: THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS, UK	MUSEO NACIONAL DE COSTA RICA, CR	
	UNIVERSIDAD AUSTRAL DE CHILE, CL	

EULAC Focus

Giving focus to the Cultural, Scientific and Social Dimension of EU – CELAC Relations

EULAC Focus addresses the whole set of topics included in the Call. It delivers a significant contribution to the improvement of EU–CELAC relations through a better understanding of the three dimensions selected by the call: cultural, scientific and social. The main objective is that of "giving focus" to these three dimensions of EU–CELAC relations, with a view to determining synergies and cross-fertilization, as well as identifying asymmetries in bi-lateral and bi-regional relations.

Research is focused on areas crucial to explain the current state of relations between EU and LAC, and will be pursued at two levels: a) research activities; b) strategic set of recommendations. In order to guarantee high impact, the research is pursued in six interdisciplinary WPs, organized "matricially". Three are "horizontal ": Cross-cutting pathways, Towards a common vision for EU–CELAC and Dissemination and outreach. The other three are "thematic/vertical": Cultural, Scientific and Social Dimension, and not only intersect the horizontal WPs but also interact between them. To achieve the objectives, the project is organized by the multidisciplinary and well balanced consortium of 19 members from 15 countries.

The consortium represents a unique group of highly competent and experienced institutions, composed specifically for the purpose of this project,comprising, in both regions, Gov Research Agencies, Research institutes, Universities, University Association, and two International European – LA Organizations active in analytical and policy oriented research and dissemination. EULAC Focus builds upon the outcomes of prior mapping conducted at the bi-regional level and will facilitate access to end-users, as well as feeding into the work of the EU-LAC Foundation and informing bi-regional networking activities of the JIRI and T-AP's work. The number of partners has been carefully defined to ensure project goals and proper diversity, while allowing for efficient project management.

| Project Reference:
693781

Website:
http://eulac-focus.net/

EU contribution:
EUR 2 499 652.50

From: 2016 to 2019

Topic: INT-12-2015

Project coordinator:
UNIVERSITAT DE BARCELONA, ES | Project Partners:

SAMUI FRANCE SARL, FR

DEUTSCHES ZENTRUM FUER LUFT – UND RAUMFAHRT EV, DE

ZENTRUM FUR SOZIALE INNOVATION GMBH, AT METCENAS OPS, CZ

STIFTUNG PREUSSISCHER KULTURBESITZ, DE

UNIVERSIDAD DE CHILE, CL

NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK, NL

FUNDACAO DE APOIO A UNIVERSIDADE DE SÃO PAULO, BR

UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO, MX

THE UNIVERSITY OF THE WEST INDIES U WI*, JM

UNIVERSIDAD DE INVESTIGACION DE TECNOLOGIA EXPERIMENTAL YACHAY, EC

UNIVERSIDAD DE BUENOS AIRES, AR | CONSEJO SUPERIOR UNIVERSITARIO CENTROAMERICANO, GT

MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVATCÍON PRODUCTIVA, ARGENTINA SECRETATRIA NACIONAL DE CIENCIA Y TECNOLOGIA, EC

ORGANIZACIÓN DE ESTADOS IBEROAMERICANOS PARA LA EDUCACION LA CIENCIA Y LA CULTURA, ES

INSTITUTO ITALO-LATINO AMERICANO, IT

PONTIFICIA UNIVERSIDAD CATOLICA DEL PERU, PE |

GIFT

Meaningful Personalization of Hybrid Virtual Museum Experiences Through Gifting and Appropriation

A main challenge with the development of virtual museums is establishing meaningful user experiences that allow for personal, complex and emotional encounters with art and cultural heritage. The GIFT project suggests creating meaningful personalization through digital gifting and emotional appropriation: Designs for allowing visitors to create their own museum tours as digital ""mixtapes"", and to play with technologies that measure emotional responses to artwork as a playful reappropriation of museum spaces.

We aim to accommodate the complex ways in which users may confront art and heritage content, and engage users to participate and share experiences that are emotionally poignant and personally profound. Through multidisciplinary, practice-based research we will develop, test and validate two ground-breaking prototypes for digital encounters with cultural heritage. From this process we will develop a framework with theory, tools, design guidelines and best practice recommendations for creating meaningful personalization of hybrid virtual museum experiences.

The GIFT consortium includes leading artists and researchers with a long history of successful collaborations, who will be working with a panel of 10 lead users from prominent European museums, to develop theoretical and practical advances with great impact for the cultural heritage sector and European society.

By enabling more engaging hybrid virtual/physical museum experiences, we will contribute to increasing citizens' curiosity and engagement. The hybrid format will also help make both virtual museum experiences as well as physical visits more engaging and attractive, thus contributing to economic growth through ticket sales as well as digital sales. By providing frameworks that help non-technical experts in the heritage sector to build and experiment with meaningful personalization of digital cultural heritage, the project gives the sector tools to build and innovate further.

Project Reference: 727040 **Website:** https://gift.itu.dk/ **EU contribution:** EUR 2 440 303 **From:** 2017 to 2019 **Topic:** CULT-COOP-08-2016 **Project coordinator:** IT-UNIVERSITETET I KOBENHAVN, DK	**Project Partners:** BLAST THEORY, UK NEXTGAME DIGITAL DOO BEOGRAD ZEMUN, RS THE UNIVERSITY OF NOTTINGHAM, UK UPPSALA UNIVERSITET, SE STICHTING EUROPEANA, NL	

GRAVITATE

Geometric Reconstruction And noVel semantIc reunificaTion of culturAl heriTage objEcts

The overall objectives of the GRAVITATE project are to create a set of software tools that will allow archaeologists and curators to reconstruct shattered or broken cultural objects, to identify and re-unify parts of a cultural object that has been separated across collections and to recognise associations between cultural artefacts that will allow new knowledge and understanding of past societies to be inferred. The project involves, as partners, a world-renowned museum, an archaeology institute, and research partners working in the manipulation of 3-D objects, semantic analysis and ICT integration. The project is driven by the needs of the archaeological institutes, exemplified by a pertinent use case, the Salamis collection shared between Cyprus and the British Museum. Expertise in 3-D scanning from previous project experience enables the partners to embark on a programme of geometrical feature extraction and matching on the one hand, and semantic annotation and matching on the other. The integration of these approaches into a single decision support platform, with a full suite of visualisation tools will provide a unique resource for the cultural heritage research community. We anticipate that the insights to be gained from the use of these tools will lead to faster and more accurate reconstruction of cultural heritage objects for study and exhibition, to greater opportunities for reunification of objects between collections and greater insights into relationships between past societies which can be communicated as coherent narratives to the public through new forms of virtual and tangible displays, involving the reconstructed objects themselves as well as 3-D printed objects and digital visualisations.

Project Reference: 665155 **Website:** http://gravitate-project.eu/ **EU contribution:** EUR 2 593 440 **From:** 2015 to 2018 **Topic:** REFLECTIVE-7-2014 **Project coordinator:** UNIVERSITY OF SOUTHAMPTON, UK	**Project Partners:** BRITISH MUSEUM, UK CONSIGLIO NAZIONALE DELLE RICERCHE, IT TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY, IL TECHNION RESEARCH AND DEVELOPMENT FOUNDATION LTD, IL THE CYPRUS INSTITUTE LIMITED, CY UNIVERSITEIT VAN AMSTERDAM, NL UNIVERSITY OF HAIFA, IL	

HERA JRP UP

HERA Joint Research Programme Uses of the Past

The HERA Joint Research Programme Uses of the Past (HERA JRP UP) consortium will establish a 3rd joint transnational programme for multi-disciplinary research into a topic at the heart of the reflective society: "Uses of the Past". The innovative projects funded will fundamentally link past(s), present and future(s) creating valuable new knowledge that gives insights into the forces shaping the social, cultural and political transformation in Europe today.

The HERA JRP UP will also pursue additional activities aiming at international capacity-building in humanities research, promoting embedding of humanities researchers in Horizon 2020, and will explore and prepare new joint actions.

Twenty-four organisations from 23 countries have pooled a substantial amount of their humanities research funding (21 M EUR) for this HERA JRP, thus increasing the efficiency and impact of public funding. The HERA JRP UP involves the launch of a joint Call for Proposals and a commonly-agreed two-stage evaluation process involving an independent, international Review Panel. The consortium expects to fund 21 transnational humanities centred projects of ~1.2 M EUR each. EC support is awarded to the level of 33% of the joint call budget. The HERA JRP UP consortium will actively support knowledge exchange activities and stimulate wider dissemination about the valuable contributions of new humanities research.

With this large transnational JRP and its associated activities the HERA JRP UP will mobilise the intellectual energies and collaborative potential of a wide range of humanities disciplines, and further develop the knowledge base of the European Research Area by sharing and debating interpretations of the human past and its relation to the present and future. While this proposal is for the delivery of the "Uses of the Past" programme, the wider vision of a collaborative, multi-disciplinary and impact-rich humanities sector across Europe is at the forefront of our collective endeavour.

Project Reference:
649307

Website:
http://heranet.info/hera-jrp-documents-1

EU contribution:
EUR 6509277

From: 2015 to 2019

Topic: REFLECTIVE-1-2014

Project coordinator:
NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK, NL

Project Partners:

AGENCE NATIONALE DE LA RECHERCHE, FR

AKADEMIE VED CESKE REPUBLIKY, CZ

AN TUDARAS UM ARD OIDEACHAS, IE

CONSIGLIO NAZIONALE DELLE RICERCHE, IT

DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV, DE

FONDS NATIONAL DE LA RECHERCHE, LU

FONDS NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR

FONDS VOOR WETENSCHAPPELIJK ONDERZOEK-VLAANDEREN, BE

FONDS ZUR FÖRDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG, AT

FUNDACAO PARA A CIENCIA E A TECNOLOGIA, PT

HRVATSKA AKADEMIJA ZNANOSTI I UMJETNOSTI, HR

LIETUVOS MOKSLO TARYBA, LT

MINISTERIO DE ECONOMIA Y COMPETITIVIDAD, ES

MINISTRSTVO ZA IZOBRAZEVANJE, ZNANOST IN SPORT, SI

NARODOWE CENTRUM NAUKI, PL

NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK, NL

NORGES FORSKNINGSRAD, NO

SCHWEIZERISCHER NATIONALFONDS ZUR FORDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG, CH

SIHTASUTUS EESTI TEADUSAGENTUUR, EE

STYRELSEN FOR FORSKNING OG INNOVATION, DK

SUOMEN AKATEMIA, FI

THE ARTS AND HUMANITIES RESEARCH COUNCIL, UK

THE ICELANDIC CENTRE FOR RESEARCH, IS

VALSTS IZGLITIBAS ATTISTIBAS AGENTURA, LV

VETENSKAPSRADET - SWEDISH RESEARCH COUNCIL, SE

I-Media-Cities

Innovative E-environments for Research on Cities and the Media

I-Media-Cities is the initiative of 9 European Film Libraries, 5 research institutions, 2 technological providers and a specialist of digital business models to share access to and valorise audiovisual (AV) content from their collections for research purposes in a wide range of social sciences (sociology, anthropology, urban planning, etc). The project revolves around cities in European history and identity. A huge quantity of fictional and non-fictional AV works (from the end of the 19th century onwards) in their collections describe cities in all aspects, including physical transformation and social dynamics. Such material could prove of enormous value to scholars in different fields of study. I-Media-Cities plans integration and technical development work to push interoperability among 9 archives and generate two types of e- environments to be used by researchers and innovators for research and other creative purposes. This will allow new approaches to research in social sciences and unleash creativity, in new forms of delivery and consumption of that content which the creative industry would be able to propose for instance in tourism or in the cultural economy. To make that possible, the project relies on collaboration among three main components: a) FHI (Film Holding Institutions); b) research institutions in different areas of social sciences; c) expertise in exploitation processes of digital content. At the end of the project, we will deliver a digital content access platform (interoperable and multilingual), made available to a growing community of researchers and creatives Europe-wide to push the boundaries of what we can learn, through AV material on cities, on European history and identity. The legacy of I- Media-Cities will be a new model for research on digital sources (applicable also to other subject areas), plus appropriate exploitation plans to consolidate and expand the platform into the European reference initiative on AV digital content.

Project Reference:
693559

Website:
www.imediacities.eu

EU contribution:
EUR 3 349 787

From: 2016 to 2019

Topic: REFLECTIVE-6-2015

Project coordinator:
CINEMATHEQUE ROYALE DE BELGIQUE, BE

Project Partners:

ARCHEIA TAINION TIS ELLADOS TAINIOTHIKI TIS ELLADOS, EL

CONSORZIO INTERUNIVERSITARIO CINECA, IT

DET DANSKE FILMINSTITUT*DANISH FILMINSTITUTE, DK

ETHNIKO KAI KAPODISTRIAKO PANEPISTIMIO ATHINON, EL

MUSEO NAZIONALE DEL CINEMA - FONDAZIONE MARIA ADRIANA PROLO - ARCHIVI DI CINEMA, FOTOGRAFIA ED IMMAGINE, IT

FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V., DE

ISTITUTO PER I BENI ARTISTICI CULTURALI E NATURALI DELLA REGIONE EMILIA ROMAGNA, IT

OSTERREICHISCHES FILMMUSEUM VEREIN, AT

STIFTELSEN SVENSKA FILMINSTITUTET, SE

DEUTSCHES FILMINSTITUT - DIF EV, DE

FONDAZIONE CINETECA DI BOLOGNA, IT

INSTITUT CATALA DE LES EMPRESES CULTURALS, ES

STOCKHOLMS UNIVERSITET, SE

UNIVERSITAT DE BARCELONA, ES

URBAN CENTER METROPOLITANO, IT

IMINDS, BE

iMARECULTURE

Advanced VR, iMmersive serious games and Augmented REality as tools to raise awareness and access to European underwater CULTURal heritagE

iMARECULTURE is focusing in raising European identity awareness using maritime and underwater cultural interaction and exchange in Mediterranean sea. Commercial ship routes joining Europe with other cultures are vivid examples of cultural interaction, while shipwrecks and submerged sites, unreachable to wide public are excellent samples that can benefit from immersive technologies, augmented and virtual reality.

iMARECULTURE will bring inherently unreachable underwater cultural heritage within digital reach of the wide public using virtual visits and immersive technologies. Apart from reusing existing 3D data of underwater shipwrecks and sites, with respect to ethics, rights and licensing, to provide a personalized dry visit to a museum visitor or augmented reality to the diver, it also emphasizes on developing pre- and after- encounter of the digital visitor. The former one is implemented exploiting geospatial enabled technologies for developing a serious game of sailing over ancient Mediterranean and the latter for an underwater shipwreck excavation game. Both games are realized thought social media, in order to facilitate information exchange among users.

iMARECULTURE supports dry visits by providing immersive experience through VR Cave and 3D info kiosks on museums or through the web. Additionally aims to significantly enhance the experience of the diver, visitor or scholar, using underwater augmented reality in a tablet and an underwater housing.

iMARECULTURE is composed by universities and SMEs with experience in diverse underwater projects, existing digital libraries, and people many of which are diversthemselves.

Project Reference: 727153	Project Partners:	FACULDADE DE CIENCIAS SOCIAIS E HUMANAS DA UNIVERSIDADE NOVA DE LISBOA, PT
Website: https://imareculture.eu/	MASARYKOVA UNIVERZITA, CZ	HOLOGRAFIKA HOLOGRAMELOALLITO FEJLESZTO ES FORGALMAZO KFT, HU
EU contribution: EUR 2 370 275	UNIVERSIDADE NOVA DE LISBOA, PT	MINISTERO PER I BENI E LE ATTIVITA CULTURALI, IT
From: 2016 to 2019	CONCORDIA UNIVERSITY, CA	
Topic: CULT-COOP-08-2016	UNIVERZITET U SARAJEVU, BA	
Project coordinator: TECHNOLOGIKO PANEPISTIMIO KYPROU, CY	UNIVERSITE D'AIX MARSEILLE, FR	
	UNIVERSITY OF CYPRUS, CY	
	3D RESEARCH SRL, IT	
	PIERIDES FOUNDATION, CY	

INCEPTION

Inclusive Cultural Heritage in Europe through 3D semantic modelling

INCEPTION realises innovation in 3D modelling of cultural heritage through an inclusive approach for time-dynamic 3D reconstruction of artefacts, built and social environments. It enriches the European identity through understanding of how European cultural heritage continuously evolves over long periods of time. INCEPTION's Inclusive approach comprises: time dynamics of 3D reconstruction ('forever'); addresses scientists, engineers, authorities and citizens ('for everybody'); and provides methods and tools applicable across Europe ('from everywhere').

INCEPTION solves the shortcomings of state-of-the-art 3D reconstruction by significantly enhancing the functionalities, capabilities and cost-effectiveness of instruments and deployment procedures for 3D laser survey, data acquisition and processing. It solves the accuracy and efficiency of 3D capturing by integrating Geospatial Information, Global and Indoor Positioning Systems (GIS, GPS, IPS) both through hardware interfaces as well as software algorithms.

INCEPTION methods and tools will result in 3D models that are easily accessible for all user groups and interoperable for use by different hardware and software. It develops an open-standard Semantic Web platform for Building Information Models for Cultural Heritage (HBIM) to be implemented in user-friendly Augmented Reality (VR and AR) operable on mobile devices.

INCEPTION collaborative research and demonstration involves all disciplines (both social and technical sciences), technologies and sectors essential for creation and use of 3D models of cultural heritage. SMEs are the thrust of INCEPTION consortium that will bring the innovation into creative industries of design, manufacturing and ICT. The Consortium is fully supported by a Stakeholder Panel that represents an international organisation (UNESCO), European and national public institutions, and NGOs in all fields of cultural heritage.

Project Reference: 665220	**Project Partners:**	
	13 BIS CONSULTING, FR	
Website: https://www.inception -project.eu/en	CONSORZIO FUTURO IN RICERCA, IT	
	DEMO CONSULTANTS BV, NL	
EU contribution: EUR 3 990 205	DIMITRIOS KARADIMAS, EL	
	FUNDACION CARTIF, ES	
From: 2015 to 2019	LENZE-LUIG 3-L-PLAN GBR, DE	
Topic: REFLECTIVE-7-2014	NATIONAL TECHNICAL UNIVERSITY OF ATHENS – NTUA, EL	
Project coordinator: UNIVERSITA DEGLI STUDI DI FERRARA, IT	NEMORIS SRL, IT	
	RDF OOD AR DI EF, BG	
	SVEUCILISTE U ZAGREBU GRADEVINSKI FAKULTET, HR	
	TECHNOLOGIKO PANEPISTIMIO KYPROU, CY	
	UNIVERZA V LJUBLJANI, SI	
	ZOLLER & FROHLICH GMBH, DE	

Mingei

Representation and Preservation of Heritage Crafts

Mingei will explore the possibilities of representing and making accessible both tangible and intangible aspects of craft as cultural heritage (CH). Heritage Crafts (HCs) involve craft artefacts, materials, and tools and encompass craftsmanship as a form of Intangible Cultural Heritage. Intangible HC dimensions include dexterity, know-how, and skilled use of tools, as well as, tradition, and identity of the communities in which they are, or were, practiced. HCs are part of the history and have impact upon the economy of the areas in which they flourish. The significance and urgency to the preservation of HCs is underscored, as several are threatened with extinction.

Despite their cultural significance efforts for HC representation and preservation are scattered geographically and thematically. Mingei will provide means to establish HC representations based on digital assets, semantics, existing literature and repositories, as well as, mature digitisation and representation technologies. These representations will capture and preserve tangible and intangible dimensions of HCs.

Central to craftsmanship is skill and its transmission from master to apprentice. Mingei will capture the motion and tool usage of HC practitioners, from Living Human Treasures and archive documentaries, in order to preserve and illustrate skill and tool manipulation.

The represented knowledge will be availed through compelling experiential presentations, using storytelling and educational applications and based on AR and MR and the Internet.

Engaging cultural experiences have positive impact on interest growth and tourism, which support HC communities and institutions and foster HC sustainability and preservation.

The consortium brings together complementary expertise and content. Pilot themes exhibit richness in tangible and intangible dimensions and are directly related to European history.

Project Reference: 822336 **Website:** http://www.mingei-project.eu/ **EU contribution:** EUR 3 261 415 **From:** 2018 to 2021 **Topic:** DT-TRANSFORMATIONS-12-2018-2020 **Project coordinator:** FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, GR	**Project Partners:** ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS, FR CONSIGLIO NAZIONALE DELLE RICERCHE, IT CONSERVATOIRE NATIONAL DES ARTS ET METIERS, FR FORDERVEREIN HAUS DER SEIDENKULTUR PARAMENTENWEBEREI HUBERT GOTZES E.V., DE	MIRALAB SARL, CH STICHTING WAAG SOCIETY, NL PIRAEUS BANK GROUP CULTURAL FOUNDATION, GR IMAGINARY SRL, IT

NewsEye

NewsEye: A Digital Investigator for Historical Newspapers

Newspapers collect information about cultural, political and social events in a more detailed way than any other public record. Since their beginnings in the 17th century they are recording billions of events, stories and names, in almost every language, every country and every day. Newspapers were always an important medium for the dissemination of public and political opinions, literary works, essays and art. This thematic wealth sets them at the centre stage for anyone interested in European cultural heritage.

In the last decades, tens of millions of newspaper pages from European libraries have been digitized and made available online, while national libraries will intensify their digitization efforts in the coming years. There is large demand for access to historical newspapers. At this very moment, probably thousands of European citizens are accessing digitized versions of historical newspapers utilizing digital library services. Whilst the broad public shows general interest in this historical and cultural resource, it is of crucial importance for many humanities scholars.

The NewsEye project involves national libraries, humanities and social science research groups and computer science research groups. It addresses a number of challenges, which will result in significant scientific advances, in several directions:
* In text recognition, text analysis, natural language processing, computational creativity and natural language generation, with regard to historical newspapers but also more universally.
* In digital newspaper research, addressing a number of editorial issues like OCR and article separation.
* In digital humanities, in respect to huge amounts of text material, availability of useful tools and possibilities of searching and browsing.
* In history, in terms of analysing historical assets with new methods across different language corpora.

Project Reference: 770299 **Website:** https://www.newseye.eu/ **EU contribution:** EUR 2 998 565 **From:** 2018 to 2021 **Topic:** CULT-COOP-09-2017 **Project coordinator:** UNIVERSITE DE LA ROCHELLE, FR	**Project Partners:** ÖSTERREICHISCHE NATIONALBANK, AT UNIVERSITAT WIEN, AT HELSINGIN YLIOPISTO, FI UNIVERSITAET INNSBRUCK, AT BIBLIOTHEQUE NATIONALE DE FRANCE, FR UNIVERSITAET ROSTOCK, DE UNIVERSITE MONTPELLIER III PAUL VALERY, FR	

PERICLES

PrEseRvIng and sustainably governing Cultural heritage and Landscapes in European coastal and maritime regionS

PERICLES promotes sustainable governance of cultural heritage (CH) in European coastal and maritime regions through the development of a theoretically grounded, multi-actor participatory framework. To meet this challenge, PERICLES has formed a strong interdisciplinary consortium comprised of research institutions, regional government and heritage partners representing 15 different disciplines.

PERICLES addresses the following objectives: a) develop an in-depth, situated understanding of the CH of marine and coastal land/seascapes, including knowledge across local, spatial, environmental, social and economic aspects; b), develop practical tools, based on stakeholder involvement and participatory governance, for mapping, assessing and mitigating risks to CH and to enhance sustainable growth and increase employment by harnessing CH assets; c), provide policy advice to improve integration of CH in key marine and environmental policies and the implementation of associated EU directives; and d), develop effective knowledge exchange networks.

To fulfill these objectives PERICLES uses a scientific approach guided by the theories of: a) space, place, and identity; b) resilience and adaptation; and c) deliberative and participatory governance. We will apply a range of participatory, deliberative and action research methods from the social sciences and arts directly involving decision-makers, stakeholders and the public.

PERICLES meets the needs of the work program by: contributing to European efforts to promote evidence-based research on the impact of participatory approaches in CH policies and governance; using a multi- and transdisciplinary approach; addressing in/tangible CH in a geographically balanced way; involving and developing CH networks of local stakeholders and policy makers; and contributing to improved implementation of European policies on coastal zones and maritime areas and providing evidence on how to link environmental and cultural policies.

Project Reference: 770504 Website: https://www.pericles-heritage.eu EU contribution: EUR 2 498 998,75 From: 2018 to 2021 Topic: CULT-COOP-07-2017 Project coordinator: AALBORG UNIVERSITET, DK	Project Partners: SYNDACAT MIXTE DE GESTION DU PARC NATUREL REGIONAL DU GOLFE DU MORBIHAN, FR UNIVERSITY OF THE HIGHLANDS AND ISLANDS LBG, UK UNIVERSITE DE BRETAGNE OCCIDENTALE, FR THE SCOTTISH ASSOCIATION OF MARINESCIENCE LBG, UK THE QUEEN'S UNIVERSITY OF BELFAST, UK	ELLINIKOS GEORGIKOS ORGANISMOS - DIMITRA, GR UNIVERSIDADE DE AVIERO, PT MUINSUSKAITSEAMET, EE WAGENINGEN UNIVERSITY, NL

PLUGGY

Pluggable Social Platform for Heritage Awareness and Participation

Pluggable Social Platform for Heritage Awareness and Participation (PLUGGY) will support citizens in shaping cultural heritage and being shaped by it. PLUGGY will enable them to share their local knowledge and everyday experience with others. The participation will include the contribution of cultural institutions and digital libraries, building extensive networks around a common interest in connecting past, present and future. PLUGGY frames its objectives around the Faro Convention, in line with new social paradigms which declare heritage as an asset and a responsibility for all, aiming to encompass greater democratic participative actions with concern for the local and the everyday. The PLUGGY Social Platform will facilitate a continuing process for creating, modifying and safeguarding heritage where citizens will be prosumers and maintainers of cultural activities. It will be web based, easily accessed and will allow the development of shared identity and differentiation. PLUGGY Social Platform's users will curate stories using the PLUGGY Curatorial Tool. Content will be both crowdsourced and retrieved from digital collections, allowing users to create links between seemingly unrelated facts, events, people and digitized collections, leading to new approaches of presenting cultural resources, and new ways of experiencing them.

PLUGGY will provide the necessary architecture for the creation of pluggable applications, allowing for beyond-the-project, not yet imagined ways to utilize the content on the social platform, while focusing on the design of the social interaction, helping to build new virtual heritage communities. The PLUGGY consortium spans 5 countries and includes 4 academic partners (ICCS, TUK, UMA, ICL), a total of 10 museums (PIOP, ESM) and 3 SMEs (CLIO, VIA, XTS) in the fields of cultural heritage and creative applications. They cover the areas of cultural heritage, social platforms, authoring tools, VR/AR, knowledge management, semantics and 3D audio.

Project Reference: 726765	Project Partners:	PIRAEUS BANK GROUP CULTURAL FOUNDATION, GR
Website: https://www.pluggy-project.eu/	TECHNICKA UNIVERZITA V KOSICIACH, SK	CLIO MUSE ETAIRIA ANAPTIXIS EFARMOGON GIA TON POLITISMO IKE, GR
EU contribution: EUR 2 374 437,50	UNIVERSIDAD DE MALAGA, ES	
From: 2016 to 2019	VYCHODOSLOVENSKE MUZEUM Y KOSICIACH, SK	
	VIANET SRL, IT	
Topic: CULT-COOP-08-2016	IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE, UK	
Project coordinator: INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS, GR	XTEAM SOFTWARE SOLUTIONS SOCIETA A RESPONSABILITA LIMITATA SEMPLIFICATA, IT	

REACH

Re-designing access to CH for a wider participation in preservation, (re)use and management of European culture

The three-year REACH project will establish a Social Platform as a sustainable space for meeting, discussion and collaboration by a wide-ranging network of development bodies, tourism, education, creative industries, cultural heritage professionals, academic experts, arts practitioners, professionals in archives and galleries, associations and interest groups representative of non-professionals and local societies, and policy-makers – all those with a stake in research in the field of culture and CH.

The REACH Social Platform's activities will have a twofold scope:
- Support: to map and provide analysis of research results achieved in previous programmes, to identify current and emerging research trends, and to offer authoritative new knowledge of the CH field to the European Commission and policy makers;
- Coordination: to offer benefits to its participants, expanding knowledge of complementary research domains, and of new participatory research methodologies, generating opportunities for cooperation, offering pathways to wider user engagement with research outputs.

In the context of radical social changes taking place at global levels, Europe faces a serious challenge: the need for its citizens to live together in peace and mutual respect and to value and enjoy the diversity of cultures, which they bring to their respective societies. The REACH project is based on the proposition that CH plays an important role in contributing to social integration in Europe, and that a fuller and more detailed picture of the range, type and impact of research and participatory research methodologies, current and future, associated with these subjects will further enhance their potential for social good.

| Project Reference:
769827

Website:
http://reach-culture.eu/

EU contribution:
EUR 1 499 981

From: 2017 to 2020

Topic: CULT-COOP-06-2017

Project coordinator:
COVENTRY UNIVERSITY, UK | Project Partners:

PROMOTER SRL, IT

STIFTUNG PREUSSISCHER KULTURBESITZ, DE

EOTVOS LORAND TUDOMANYEGYETEM, HU

UNIVERSIDAD DE GRANADA, ES

UNIVERZITA KARLOVA, CZ

MINISTERO DELLO SVILUPPO ECONOMICO, IT | |

RePAST

Strengthening European integration through the analysis of conflict discourses: revisiting the past, anticipating the future.

RePAST aims at investigating how European societies deal with their troubled pasts today through the analysis of conflict discourses rooted in those pasts, with a view on the impact of those discourses on European integration. It will implement actions and propose strategies, both at the levels of policy-making and civil society, for reflecting upon these discourses to strengthen European integration. The project addresses directly the specific challenge and scope of the topic CULT-COOP-02-2017, focusing on civil society, informal education and political discourses. The methodological approach of RePAST is based on (i) multidisciplinarity, (ii) cross-country comparative analysis and (iii) innovative actions for citizens' engagement with troubled pasts. First, conflict discourses rooted in troubled pasts will be studied in four fundamental spaces of civil society and sources of informal education: (a) history (oral and official), (b) media (journalistic- and citizen-led media), (c) art and culture, (d) politics (formal and informal politics). It will also take into account how the current crisis in its multiple forms (economic crisis, refugee crisis, political crisis) mediates these narratives. RePAST brings the various disciplines in dialogue with each other on the ground of an empirical study across the geographical and historical spectrum. Second, RePAST will study comparatively eight cases of countries whose troubled pasts sit squarely on legacies that still endanger European integration today: Cyprus, Germany, Poland, Greece, Bosnia, Kosovo, Ireland, and Spain. Lastly, RePAST emphasizes the active engagement of memory agents through a series of innovative actions for creating participatory experiences, i.e. interactive storytelling, research tool for analysis on memory and conflict, workshops for cultural tourism professionals, a treasure-hunt game to discover troubled pasts, and digital games for renegotiating troubled pasts.

Project Reference: 769252 Website: https://www.repast.eu/ EU contribution: EUR 2 499 890,91 From: 2018 to 2021 Topic: CULT-COOP-02-2017 Project coordinator: TECHNOLOGIKO PANEPISTIMIO KYPROU, CY	Project Partners: DUBLIN CITY UNIVERSITY, IE UNIVERSIDAD AUTONOMA DE MADRID, ES LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN, DE UNIVERZA V LJUBLJANI, SI UNIVERSITETET I AGDER, NO CLIO MUSE ETAIRIA ANAPTIXIS EFARMOGON GIA TON POLITISMO IKE, EL	SERIOUS GAMES INTERACTIVE APS, DK ARISTOTELIO PANEPISTIMIO THESSALONIKIS – EIDIKOS LOGARIASMOS KONDILION EREVNAS, EL VESALIUS COLLEGE, BE LANCASTER UNIVERSITY, UK WIDOK. FUNDACJA KULTURY WIZUALNEJ, PL

RETOPEA

Religious Toleration and Peace

To address the issue of religious diversity, RETOPEA will develop active learning from history: This is a new approach that provides teenagers with tools allowing them to think about religious cohabitation in a more nuanced, empathic way. The project encompasses research and innovation activities. It will carry out challenging research on historical peace treaties and conflict settlements, as well as on contemporary representations of religious cohabitation in culture and media. Studying historical peace-making initiatives will deepen our understanding of how religious conflicts and tensions have been accommodated and solved in different traditions (Christian, Muslim, Jewish) over time. Research into contemporary representations will subsequently reveal how such initiatives are used, misinterpreted or ignored in different types of culture and media today. These studies will provide insights into (a) effective policies and practices for approaching religious coexistence, and (b) alternative representations of religious cohabitation that engage constructively with contemporary concerns and past traditions. Based on this research, RETOPEA will develop innovative educational tools and evidence-based policy recommendations. Through active participation in the production of docutubes (online movies), teenagers will be encouraged to actively engage with different ways of understanding religious cohabitation. RETOPEA will build an educational package to support students in creating their docutubes. A training course will provide professional educators with information and training about religious diversity and peace-making in an accessible and attractive way. It will use the "Badged Open Course" format – a free online format that provides a certificate on completion. The experiences with students and the research results will offer the basis of policy recommendations to schools, educational authorities, religious leaders and (regional, national and European) policymakers.

Project Reference: 770309	Project Partners:	
Website: N/A	MACEDONIAN CENTER FOR INTERNATIONAL COOPERATION SKOPJE, MK	
EU contribution: EUR 2 414 294.25	SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE, MK	
	HELSINGIN YLIOPISTO, FI	
From: 2018 to 2022	THE OPEN UNIVERSITY, UK	
	UNIVERSIDAD DE GRANADA, ES	
Topic: CULT-COOP-05-2017	LEIBNIZ-INSTITUT FUR EUROPAISCHE GESCHICHTE, DE	
Project coordinator:	UNIWERSYTET WARSZAWSKI, PL	
KATHOLIEKE UNIVERSITEIT LEUVEN, BE	FUNDACION EUROARABE DE ALTOS ESTUDIOS, ES	
	TARTU ULIKOOL, EE	
	FOYER, BE	

Scan4Reco

Multimodal Scanning of Cultural Heritage Assets for their multilayered digitization and preventive conservation via spatiotemporal 4D Reconstruction and 3D Printing

Scan4Reco will develop a novel portable, integrated and modular solution for customized and thus cost-effective, automatic digitization and analysis of cultural heritage objects (CHOs), even in situ.

A multi-sensorial 3D scanning - facilitated by a mechanical arm – will collect multi-spectra data and then, a hierarchical approach for 3D reconstruction of CHOs will be applied, enabling multi-layered rendering, advancing both analysis and 3D printing procedures. The goal will be to create highly accurate digital surrogates of CHOs, providing also detailed insight over their surface and also the volumetric structure, material composition and shape/structure of underlying materials, enabling rendering either via visualization techniques or via multi-material 3D printing.

Material analyses will be applied, to understand the heterogeneous nature and complex structures of CHOs, to identify the broad and varied classes of materials and to understand their degradation mechanisms over time, deriving context-dependant ageing models per material. Uni-material models will be spatiotemporally simulated, based on environmental phenomena modeling, so as to collectively render imminent degradation effects on the multi-material CHOs, enabling prediction and recreation of their future appearance, as well as automatic restoration, reaching even back to their original shape. Scan4Reco will further facilitate conservation, by indicating spots/segments of cultural objects that are in eminent conservation need and require special care, while suggestions will be provided by a dedicated Decision Support System (DSS), over conservation methods that should be followed.

All the above will be validated on real case scenarios involving heterogeneous objects of various sizes and materials, in 2 pilot real-world use cases. To enhance the accessibility of the digitized cultural objects to the scientific community, field experts and the general public, a virtual model of a museum will be launched.

Project Reference: 665091	**Project Partners:**	
Website: www.scan4reco.eu	AVASHA AG, CH	
EU contribution: EUR 3 417 762	B & W TEK EUROPE GMBH, DE	
From: 2015 to 2018	CENTRO DI RICERCA SVILUPPO E STUDI SUPERIORI IN SARDEGNA SOCIETA' A RESPONSABILITA' LIMITATA, IT	
Topic: REFLECTIVE-7-2014	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V., DE	
Project coordinator: ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS, EL	IDRYMA ORMYLIA, EL	
	OPIFICIO DELLE PIETRE DURE, IT	
	RESEARCH FOR SCIENCE, ART AND TECHNOLOGY (RFSAT) LTD, UK	
	UNIVERSITA DEGLI STUDI DI VERONA, IT	

SIGN-HUB

The Sign Hub: preserving, researching and fostering the linguistic, historical and cultural heritage of European Deaf signing communities with an integral resource

SIGN-HUB aims to provide the first comprehensive response to the societal and scientific challenge resulting from generalized neglect of the cultural and linguistic identity of signing Deaf communities in Europe. It will provide an innovative and inclusive resource hub for the linguistic, historical and cultural documentation of the Deaf communities' heritage and for sign language assessment in clinical intervention and school settings. To this end, it will create an open state-of-the-art digital platform with customized accessible interfaces. The project will initially feed that platform with core content in the following domains, expandable in the future to other sign languages: (i) digital grammars of 6 sign languages, produced with a new online grammar writing tool; (ii) an interactive digital atlas of linguistic structures of the world's sign languages; (iii) online sign language assessment instruments for education and clinical intervention, and (iv) the first digital archive of life narratives by elderly signers, subtitled and partially annotated for linguistic properties. These components, made available for the first time through a centralized platform to specialists and to the general public, will (a) help explore and value the identity and the cultural, historical and linguistic assets of Deaf signing communities, (b) advance linguistic knowledge on the natural languages of the Deaf and (c) impact on the diagnosis of language deficits within these minorities. SIGN-HUB will thus contribute to the dissemination and reuse of those assets in broader contexts, as part of European identity. The project is a critical attempt to rescue, showcase and boost that largely unknown part of our common heritage, as well as to ultimately enhance the full participation of Deaf citizens in all spheres of public life on an equal footing with hearing citizens.

Project Reference:
693349

Website:
http://www.unive.it/pag/33750/

EU contribution:
EUR 2 499 337,50

From: 2016 to 2020

Topic: REFLECTIVE-2-2015

Project coordinator:
UNIVERSIDAD POMPEU FABRA, ES

Project Partners:

BOGAZICI UNIVERSITESI, TR

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, FR

CONSORZIO INTERUNIVERSITARIO NAZIONALE PER L'INFORMATICA, IT

GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS, DE

TEL AVIV UNIVERSITY, IL

UNIVERSITA CA' FOSCARI VENEZIA, IT

UNIVERSITA' DEGLI STUDI DI MILANO-BICOCCA, IT

UNIVERSITEIT VAN AMSTERDAM, NL

UNIVERSITE PARIS DIDEROT - PARIS 7, FR

SILKNOW

SILKNOW. Silk heritage in the Knowledge Society: from punched cards to big data, deep learning and visual / tangible simulations

Silk was a major factor for progress in Europe, mostly along the Western Silk Road's network of production and market centres. Silk trade also allowed for exchange of ideas and innovations. Punched cards were first used in Jacquard silk looms, long before modern computers were even imagined. Today, too, fashion and high-end textile industries have a huge impact in the EU, reaching €525 billion in annual turnover. Silk, however, has become a seriously endangered heritage. Although many European specialized museums are devoted to its preservation, they usually lack size and resources to establish networks or connections with other collections. SILKNOW aims to produce an intelligent computational system that goes beyond current technologies in order to improve our understanding of European silk heritage. This legacy will be studied, showcased and preserved through the digital modelling of its weaving techniques (a "Virtual Loom"). Users will access the resulting information through visual and tangible simulations, and experience vastly enhanced search tools, providing better results through automatic visual recognition, advanced spatio-temporal visualization, multilingual and semantically enriched access to existing digital data. Thus, SILKNOW will improve the understanding of EU heritage and its rich diversity, applying next-generation ICT research to the needs of various users (museums, education, tourism, creative industries, media…), and preserving an intangible heritage (ancient weaving techniques) for younger generations. Its research activities and outputs will have direct impact in computer science and big data management, focusing on searching digital content in heterogeneous, multilingual and multimodal databases. SILKNOW will be possible only with the close cooperation of a multidisciplinary team, including areas as ICT, text analytics, image processing, semantics, big data, 3D printing, art history, terminology, textile fabrication and conservation.

Project Reference: 769504	Project Partners:	EURECOM, FR
Website: http://silknow.org/	GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER, DE	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR
EU contribution: EUR 2 390 060,50	INSTITUT JOZEF STEFAN, SI	
	MONKEYFAB S.C., PL	
From: 2018 to 2021	UNIVERSITA DEGLI STUDI DI PALERMO, IT	
Topic: CULT-COOP-09-2017	INSTITUTO CERVANTES, ES	
Project coordinator: UNIVERSITAT DE VALENCIA, ES	GARIN 1820 SOCIEDAD ANONIMA, ES	

TRACES

Transmitting Contentious Cultural Heritages with the Arts: From Intervention to Co-Production

Transmitting Contentious Cultural Heritages with the Arts: From Intervention to Co-Production (TRACES) aims to provide new directions for cultural heritage institutions to contribute productively to evolving European identity and reflexive Europeanization. To do so, it deploys an innovative ethnographic/artistic approach, focused on a wide range of types of 'contentious heritage.' Attention to contentious heritage is crucial as it is especially likely to raise barriers to inclusivity and convivial relations, as well as to be difficult to transmit to the public. Transmitted effectively, however, it is potentially especially productive in raising critical reflection and contributing to reflexive Europeanization, in which European identity is shaped by self-awareness and on-going critical reflection.

Through rigorous and creative in-depth artistic/ethnographic research, TRACES will provide a systematic analysis of the challenges and opportunities raised by transmitting contentious, awkward and difficult pasts. It will do so by setting up Creative Co-Productions (CCPs) in which artists, researchers, heritage agencies and stakeholders work together in longer term engagements to collaboratively research selected cases of contentious heritage and develop new participatory public interfaces. These will be documented and analysed, including educational research. These interfaces, which include online as well as physical exhibitions and other formats, are part of the significant output planned for TRACES, along with academic publications and a novel reflective Contentious Heritage Manual that will synthesise results to provide directions for future practical reflexive transmission of cultural heritage in Europe.

TRACES is a multi-disciplinary team, bringing together established and emerging scholars, and providing high-level expertise, relevant experience and creative energy, to provide a rigorous and innovative approach to the transmission of European cultural heritage.

Project Reference: 693857 **Website:** http://www.traces.polimi.it/ **EU contribution:** EUR 2 303 358,75 **From:** 2016 to 2019 **Topic:** REFLECTIVE-2-2015 **Project coordinator:** UNIVERSITAET KLAGENFURT, AT	**Project Partners:** DRUSTVO ZA DOMACE RAZISKAVE, SI HOSMAN DURABIL, RO HUMBOLDT-UNIVERSITAET ZU BERLIN, DE NATURHISTORISCHES MUSEUM, AT POLITECNICO DI MILANO, IT THE UNIVERSITY OF EDINBURGH, UK UNIVERSITETET I OSLO, NO UNIVERSITY OF ULSTER, UK UNIWERSYTET JAGIELLONSKI, PL ZURCHER HOCHSCHULE DER KUNSTE, CH	

TROMPA

Towards Richer Online Music Public-domain Archives

Classical music is one of the greatest treasures of Europe's cultural heritage. Although a historical genre, it is continually (re)interpreted and revitalised through musical performance.

Today, most of the classical repertoire is in the public domain; massive numbers of scores and recordings are now available in online community-contributed repositories actively used by scholars and musicians. Technology offers ways to enrich and contextualise this repertoire, so that users might better understand and appreciate it. However, due to varying data quality and scale, this does not happen automatically for public-domain resources. Amidst a deluge of data, relevant associations across repositories and modalities (e.g. from scores to recordings) still have to be made manually, while insights by previous users are not explicitly stored for future users to learn from. It is thus impossible to get comprehensive insight into the full wealth of our musical cultural heritage.

TROMPA will change this by massively enriching and democratising our publicly available musical heritage through a user-centred co-creation setup. For analysing and linking music data at scale, the project will employ and improve state-of-the-art technology. Music-loving citizens (including the large scene of amateur performers) will cooperate with the technology, giving feedback on algorithmic results, and annotating the data according to their personal expertise.

Following an open innovation philosophy, all knowledge derived will be released back to the community in reusable ways. This enables many uses in applications which directly benefit crowd contributors and further audiences. TROMPA will demonstrate this for music scholars, content owners, instrumentalists, choir singers, and music enthusiasts. Via the consortium and associated partners, global audiences can be reached at an unprecedented scale, with potential outreach to millions of users.

Project Reference: 770376	Project Partners:	STICHTING KONINKLIJK CONCERTGEBOUWORK EST, NL
Website: https://trompamusic.eu/	TECHNISCHE UNIVERSITEIT DELFT, NL	STICHTING CENTRALE DISCOTHEEK, NL
EU contribution: EUR 3 054 930	GOLDSMITHS' COLLEGE, UK	
From: 2018 to 2021	PEACHNOTE GMBH, DE	
Topic: CULT-COOP-09-2017	UNIVERSITAT FUR MUSIK UND DARSTELLENDE KUNST WIEN, AT	
Project coordinator: UNIVERSIDAD POMPEU FABRA, ES	VIDEO DOCK BV, NL	
	VOCTRO LABS SL, ES	

UNREST

Unsettling Remembering and Social Cohesion in Transnational Europe

The main purpose of this project is to deliver new empirical yet also theoretically informed knowledge of those memory agents, practices and contexts capable of countering fixed and essentialist war and conflict memories, opening them to reflexive reinterpretation and change. Theoretically, the project will develop the concept of an agonistic ethico-political mode of remembering as distinct from the antagonistic and cosmopolitan modes, and provide a thick description of their defining characteristics. A related aim is to assess which of the two reflective modes, the cosmopolitan or the agonistic, best contributes to a shared European ethico-political framework and transnational solidarity.

Empirically, the project will test the different ethico-political modes of remembering in contemporary heritage discourses and practices by different memory milieus located at various territorial scales in relation to some of the armed conflicts of the 20th century with an enduring legacy. By exploring the relationship between 1) the modes of remembering being negotiated and contested in various European settings; 2) the memory agents promoting them (heritage professionals, policy-makers, historians, creative artists, socio-political activists); and 3) material and immaterial heritage (museums, burial sites, media, visual and written culture), the project will assess how, why and in which contexts certain modes of remembering the violent past are able to prevail as well as their articulation with various territorial identities.

Project Reference: 693523 **Website:** www.unrest.eu **EU contribution:** EUR 2 489 648,75 **From:** 2016 to 2019 **Topic:** REFLECTIVE-5-2015 **Project coordinator:** RUHR-UNIVERSITAET BOCHUM, DE	**Project Partners:** AARHUS UNIVERSITET, DK AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS, ES MAMBRINO SL, ES POLSKA AKADEMIA NAUK, PL STIFTUNG ZOLLVEREIN, DE UNIVERSITY OF BATH, UK	

VISUAL HISTORY OF THE HOLOCAUST

VHH

Visual History of the Holocaust: Rethinking Curation in the Digital Age

The Holocaust is a central reference point for European history and a 'negative founding myth' of European integration. VHH is an innovation action that focuses on the digital curation and preservation of film records relating to the discovery of Nazi concentration camps and other atrocity sites. We combine state-of-the-art concepts and practices from information science, museum pedagogy and digital storytelling to design a new approach for the engagement with a significant aspect of European audio-visual heritage. While the majority of these film records are in the public domain as they were produced by Allied military personnel on government order, hardly any of them are available in digital formats fit for the purposes of technology enabled research, analysis, and curatorial re-use. Building on the advanced digitisation of a relevant selection of these materials VHH will develop new methods in digital curation and apply sophisticated technologies to the analysis and time-based annotation of these historical materials. Filmic records will be dynamically linked with photographs, audio, and texts in order to discover and unlock layers of context and meaning inaccessible through traditional linear narrative modes of dissemination. Our aim is to develop a ground-breaking inclusive concept of digital curation to innovate curatorial work with digitised film and media collections and to create best practice models and tool kits for advanced digitisation, automated analysis, linking of different media types, and the linking of tangible and intangible assets. VHH will develop new forms of learning experiences and user interaction with the digital data and the stories contained in it. We will curate a discrete set of engagement levels to facilitate users' engagement and co-creation. The resulting prototype applications will deliver new impulses to a range of industry sectors in education, museums, libraries and archives, cultural tourism and the content industries.

Project Reference: 822670	**Project Partners:**	STIFTUNG BAYRISCHE GEDENKSTATTEN, DE
Website: https://www.vhh-project.eu/en/	OSTERREICHISCHES FILMMUSEUM VEREIN, AT	STIFTUNG NIEDERSACHSISCHE GEDENKSTATTEN, DE
EU contribution: EUR 4 989 685,63	TECHNISCHE UNIVERSITAET WIEN, AT	BUNDESANSTALT KZ-GEDENKSTATTE MAUTHAUSEN/MAUTHAUSEN MEMORIAL, AT
From: 2019 to 2022	JUSTUS-LIEBIG-UNIVERSITAET GIESSEN, DE	DEUTSCHES FILMINSTITUT - DIF EV, DE
Topic: DT-TANSFORMATIONS-12-2018-2020	THE HEBREW UNIVERSITY OF JERUSALEM, IL	MAX.RECALL INFORMATION SYSTEM GMBH, DE
Project coordinator: LUDWIG BOLTZMANN GESELLSCHAFT OSTERREICHISCHE VEREINIGUNG ZUR FORDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG, AT	UNIVERSITAET BREMEN, DE	
	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS, FR	
	RTD SERVICES OG, AT	

ViMM

Virtual Multimodal Museum

Virtual Multimodal Museum (ViMM) proposes a major, high-impact CSA across the field of Virtual Museums (VM), within the overall context of European policy and practice on Virtual Cultural Heritage (VCH). A highly expert seven (7) partner consortium will leverage the support of a unique and powerful Advisory Group, consisting of many of the Europe and the world's leading public and private sector organisations in the field, to define and support high quality policies, strategic and day-to day decision making, the utilisation of breakthrough technological developments such as VR/AR and to nurture an evidence-based view of growth and development impacted by VM, supported by a set of case studies in culturally-rich regions of South Europe affected by economic recession.

Its work will be founded on building a consensual framework directly involving Europe's leading VM decision-makers and practitioners in defining and resolving existing issues spread across 7 interlinked Thematic Areas ('the 7 Ds'): Definitions – Directions – Documentation – Dimensions – Demand- Discovery - Decisions and will result in wide-reaching stakeholder participation and very high visibility. The latter will be achieved through organisation of key events at policy and practitioner/stakeholder levels, extensive use of the media, and by the introduction of a highly interactive and wide-reaching communication platform, deploying social media and novel approaches to enable focused debate by all interested parties, supported by access to representations of excellence and a decision-support tool for stakeholders.

An initially broad and open approach will be refined through a process of definition, consolidation and resolution activities to arrive at a clear Manifesto and Roadmap for Action on VM, validated at a final ViMM international conference. Measurable impacts will be achieved on the role and capability of VCH – and VM in particular – to meet their enormous potential in society and the economy.

Project Reference: 727107	Project Partners:	
	FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS, EL	
Website: https://www.vi-mm.eu/		
	7REASONS MEDIEN GMBH, AT	
EU contribution: EUR 1 170 550		
	UNIVERSITE DE GENEVE, CH	
From: 2016 to 2019		
	STIFTUNG PREUSSISCHER KULTURBESITZ, DE	
Topic: CULT-COOP-08-2016		
	UNIVERSIDAD POMPEU FABRA, ES	
Project coordinator: TECHNOLOGIKO PANEPISTIMIO KYPROU, CY		
	7SCENES B.V., NL	

SUCCESS STORIES

ATHENA

Remote Sensing Science Center for Cultural Heritage

On the ground, in the air and even from space – remote-sensing data is generated by a variety of technologies that have opened up new possibilities to identify and study sites of interest. The Cyprus University of Technology is pursuing excellence in this field through an EU-funded three-year project named ATHENA, which was launched in December 2015 to support this drive.

ATHENA focuses on the specialised science centre that is being set up by the university's Remote Sensing and Geo-environment Research Laboratory. The project is being carried out with the help of experts from the German Aerospace Centre and Italy's National Research Council.

Skills are being honed through a wide variety of activities, such as staff exchanges, workshops and summer schools. Meetings and conferences are providing further opportunities to exchange information and ideas.

The partners are keen to take their field forward, notably through innovation involving geographical information systems that integrate remote-sensing data with input from other sources. Optimising scientific instrumentation is another priority.

ATHENA, they note, has already demonstrated scientific progress beyond the state of the art, through work on innovative topics such as the automatic detection of destroyed monuments and sites in the Palmyra region based on high-resolution optical data.

Other examples include the use of big data infrastructures for the monitoring of World Heritage sites, and analysis of the stability of ancient underground structures. New and improved techniques could greatly facilitate the preservation of the cultural heritage that has helped to shape European identities and our shared past, and are also expected to generate socio-economic benefits.

Project details

- Participants: **Cyprus (Coordinator)**, Italy, Germany
- Project N°: 691936
- EU contribution: € 972 841
- Duration: December 2015 to November 2018
- https://athena2020.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?&artid=49605&caller=FP

CoHERE

Critical Heritages: performing and representing identities in Europe

Although heritage has benefits in terms of fostering belonging, ideas about the past are also used to sow division. The challenge this presents can be seen in phenomena such as the rise of populism and rejection of cultural diversity, as well as disaffection with the EU and the prospect of its actual fragmentation.

The EU-funded COHERE project is exploring relationships between identity and representations of history, and ways in which heritage is used to unite and divide. Thus, the research aims to improve understanding of the different manifestations of Europe's heritage to better examine their socio-political and cultural significance.

This is vital for addressing weakening attachment to historical ideas of Europe and the European Union itself. Therefore, COHERE is tackling an intensifying problem within the EU by contributing to the development of more inclusive and communitarian forms of identity.

"We study representations of European heritage, the ideas about collectivity that they contain, tensions between them and their purchase at local levels across numerous cultural forms," explains project coordinator Chris Whitehead of the University of Newcastle in the UK. "The idea of European heritage is understood differently in different places and at different levels of society. While embraced by some, it is resisted by others, and has a weaker relevance for collectivity than is assumed in European-level cultural policy. Forms of collectivity, such as national communities, often have greater purchase and can be appropriated for identity politics, particularly by right-wing populist parties."

Diverse cultural forms

COHERE explores a range of European territories and contexts both comparatively and in depth. The research is based on the understanding that heritage is enacted at different levels – not just at official sites or museums but also in political discourse, music, language, food, school curricula and daily life.

The team is working with museums to design ways of encouraging public dialogue on critical issues of European heritage through exhibitions, events and displays. A musical composition, documentary films, a festival presenting the research themes, workshops for young people and online educational material will be created during the project, which also provides training and career development for junior researchers. The results can be used by heritage professionals, schools, cultural centres and policymakers to develop new methods of engagement and to frame cultural policy.

Complicating identity

At a basic level, COHERE is finding ways of "complicating" people's ideas about the past, as Whitehead puts it, in order to challenge monolithic understandings of history that support exclusive identity politics. Through such practices, the project is looking to change how people link the past to their sense of self, with the aim of fostering a more reflective outlook on the issue.

"We aim to promote a wider, more complex understanding of European heritage among key actors, including politicians, policymakers and heritage professionals who are in a position to engage public audiences," says Whitehead. "A core purpose is to help such actors consider how this might be conceptualised in a way that recognises difference but brings potential for a critical and pluralised identity politics conducive to civility and peaceful intergroup relations."

Project details
- Participants: UK (Coordinator), Denmark, Netherlands, Greece, Turkey, Italy, Latvia, Belgium, Poland
- Project N°: 693289
- EU contribution: € 2 499 651
- Duration: April 2016 to March 2019
- https://research.ncl.ac.uk/cohere/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47857

E-RHIS

EU Research Science Infrastructure for Heritage Science (Preparatory phase)

The European Research Infrastructure for Heritage Science (E-RIHS) will support cross-disciplinary research on heritage interpretation, preservation, documentation and management. As a first step towards achieving this ambitious goal, the E-RIHS PP (European Research Infrastructure for Heritage Science Preparatory Phase) project is putting in place the legal and administrative foundations for the infrastructure, along with its strategic planning for scientific development, academic and professional training, sustainability and overall operational mode.

"While Europe's expertise in heritage science is unquestioned, global investment in this field elsewhere in the world is growing apace," says E-RIHS project coordinator Luca Pezzati from the Consiglio Nazionale delle Ricerche in Italy. "We need to find a way of preserving and increasing the visibility of Europe's cultural heritage. Our aim is that this infrastructure will establish the EU as a global reference point for culture, encouraging foreign students to enrol in European universities and creating opportunities for closer collaboration."

Heritage science is about the analysis, conservation and preservation of cultural heritage and works of art, from the Mona Lisa to prehistoric cave-wall paintings and the Roman Colosseum. It involves researchers and institutions active across a wide range of disciplines, including chemistry, physics, art history, computer sciences, architecture, archaeology and digital humanities.

Preparing the ground

The preparatory phase will run until 2020, after which time integrated research services will gradually become accessible under the E-RIHS brand. A total of 23 countries are involved in developing the infrastructure's legal structure and delivering access to archives, training and expertise.

"Researchers will benefit from easier access to state-of-the-art technologies, such as mobile intervention units that can carry out non-destructive analyses at museums, remote monasteries or archaeological sites," Pezzati explains. "Reuse of scientific datasets produced by the infrastructure and digitisation of scientific archives will also open doors to immense sources of knowledge currently stored in dedicated archives across Europe and encourage new platforms for data sharing and exchange."

The E-RIHS network will make it easier to carry out coordinated cross-border training activities and to study abroad in participating institutions and laboratories. "E-RIHS is a long-term vision for how European heritage science research can remain at the cutting edge," says Pezzati. "It will help foster increased understanding of the social and economic value of cultural heritage to European life."

Institutional cooperation

Establishing E-RIHS requires the full participation of relevant academic, research and cultural heritage institutions across Europe as well as commitment from policymakers. In this preparatory phase, the focus is on establishing the legal status of the infrastructure as well as the managerial structure and location (Florence in Italy has been tentatively identified).

"We are advancing at a rapid pace towards achieving these preliminary goals," says Pezzati. "More than 100 institutions worldwide have expressed an interest in joining or collaborating with E-RIHS."

Among the four planned major platforms (mobile lab, large-scale facilities, archives and digital platform for data sharing), the mobile lab is already operational, access to large-scale facilities has been enabled and the digital platform is at full-speed development, along with the provision of access to physical archives. Next steps include the launch of DIGILAB, a digital platform for sharing and investigating scientific data sets in heritage. Interest in joining E-RIHS and accessing facilities, training activities and research expertise across borders continues to grow as the project progresses.

Project details
- Participants: Italy (Coordinator), Belgium, Cyprus, Czechia, Germany, Spain, France, Greece, Hungary, Ireland, Israel, Netherlands, Poland, Slovenia, UK, Portugal
- Project N°: 739503
- EU contribution: € 3 999 449
- Duration: February 2017 to January 2020
- http://www.e-rihs.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?&artid=47736&caller=FP

EU-LAC-MUSEUMS

Museums and Community: Concepts, Experiences, and Sustainability in Europa, Latin America and the Caribbean

Museums have a unique responsibility for communicating the shared history between Europe and the LAC region. They are also well-placed to reach all kinds of communities, from cities to remote villages, and provide a space for building social cohesion.

A large amount of research has been carried out into relationships between small to medium-sized rural museums and their communities in both the EU and the LAC region, but comparative bi-regional analysis is lacking. To bridge this gap and develop a related historical and theoretical framework, the EU-LAC-Museums project is fostering dialogue and cooperation between academia, museums, policy makers and communities in the two regions.
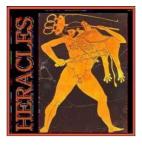
EU-LAC-Museums is based on an awareness that many rural museums in LAC countries empower under-represented communities by enabling them to highlight their history. Moreover, by focusing on the natural landscape and traditional structures, they contribute to environmental sustainability.

Project researchers are investigating how these institutions can inform museum practice, particularly in remote and island locations, with a view to enhancing social inclusiveness in the museum sector in such areas. They are also researching how museums and communities in the two regions address the issue of sustainability, as well as exploring the subject of migration history in order to broaden knowledge of EU-LAC relations in the museum field.

Information gathered by the project is made available to potential users through a bespoke website. Allied to the use of heritage technologies, the website helps museum communities preserve their cultural and religious objects, indigenous knowledge and traditional skills, along with the environments in which these elements developed. It is backed by a dissemination programme, which includes bi-regional workshops and youth exchanges.

The work should lead to the formulation of a common vision for small to medium-sized museums and their communities, based on existing EU-LAC cooperation principles and to be ratified by the International Council of Museums.

Project details

- Participants: United Kingdom (Coordinator), Chile, Costa Rica, Spain, France, Jamaica, Peru, Portugal
- Project N°: 693669
- EU contribution: € 2 422 406
- Duration: September 2016 to August 2020
- https://eulacmuseums.net/index.php
- http://ec.europa.eu/research/infocentre/article_en.cfm?&artid=49636&caller=FP

HERACLES

HEritage Resilience Against CLimate Events on Site

Europe has a particularly rich cultural heritage that forms an inheritance from the past and a legacy for future generations. It enriches our lives, inspires artists, builds shared identities and can bring great economic benefits to local communities.

Yet, while many ancient buildings and artefacts have lasted for millennia to reach us today, their survival is increasingly precarious. Climate change is upon us and it is accelerating. In Europe, more frequent and more extreme weather events can put cultural heritage and the benefits it offers at increased risk in a wide variety of ways.

Increased rainfall, rising sea levels and more frequent storms are a particular danger. They can cause structural damage and boost physical and chemical erosion of stone monuments.

The HERACLES project is designing and testing a systems-based approach for protecting cultural heritage in the face of climate change. It is developing systematic methods of identifying, assessing and evaluating the risks a monument might face and incorporating these into an online ICT platform. As well as the risks, the platform will also offer information on both preventative measures as well as remediation measures when damage has already occurred.

When completed, HERACLES will be a resource for a variety of users, including conservators, municipalities, town planners, government agencies and companies – all those responsible for cultural heritage and involved in its preservation.

"HERACLES is focusing on the Mediterranean as it is of more concern than other parts of Europe," explains project leader Giuseppina Padeletti of Italy's National Research Council. "Changes in rainfall are predicted to be more extreme, and the abundance of ancient monuments means the potential losses are high. To assess risks, we use technologies and expertise from satellite surveillance, climatology, hydrology and engineering among many others. To evaluate the impact of risks we need sociologists and economists, and to fix problems we need structural engineers, chemists and material scientists. The challenge for us is to successfully realise a truly 'holistic' approach."

Tailored solutions for specific cases

To validate its methodologies the project is applying them to three cultural heritage sites: in Italy, the medieval walled town of Gubbio, in Crete, the ancient Minoan Palace of Knossos and the castle of Koules in Heraklion.

For example, the Venetian castle of Koules sits at the entrance to the ancient harbour of Heraklion. Open to the sea, it is at risk of both structural and chemical damage from more frequent storms, stronger waves and increased salinity. The fortress is a vital part of the cultural infrastructure of Heraklion, which depends greatly on tourism.

The partners have installed wave monitors and meteorological stations around the castle to monitor these risks and assess their importance. At the same time material scientists are investigating the damage caused by salinity in order to recommend both preventative and remedial actions.

The intention is that the lessons learned and procedures developed at Koules will be applicable to the many thousands of castles that line the Mediterranean coastline and are threatened by climate change.

"HERACLES will produce generic 'protocols' for identifying and assessing climate-driven risks," explains Padeletti. "End-users can then assess the potential socio-economic impacts of the various conservation options open to them. As funding for conservation becomes constrained, so our management tools will help the responsible organisations to make informed choices and prioritise their responses."

Getting local people involved is also an important element of HERACLES. Monuments can bind communities through common identities and concerns; and they can be significant sources of income and employment in local economies.

"The loss of an ancient monument is a loss for us all – these are unique structures," says Padeletti. "However, for local people such losses are particularly significant. This is why we are working with municipalities in our case studies to inform local people and make them aware of our work and its significance for their social and economic well-being."

Project details
- Participants: Italy (Coordinator), Belgium, Germany, France, Greece, Portugal, Austria
- Project N°: 700395
- EU contribution: € 6 564 313
- Duration: May 2016 to April 2019
- http://www.heracles-project.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47856

INCEPTION

Inclusive Cultural Heritage in Europe through 3D semantic modelling

The EU-funded INCEPTION project is enriching the European identity by using technology to enhance visitors' experiences of cultural heritage sites. The project is reconstructing these sites in 3D to create virtual tours using virtual and augmented reality techniques, an innovation that is mainly used for games in the entertainment industry.

The project is using this technology to visually unmask old stones and relics, revealing the mysteries they hold within. The technology allows the researchers to provide a detailed set of information semantically accessible and, through an application available on its online platform, a look into the past, peeling away the many layers of history contained within a historical site.

The researchers are also creating a new way for cultural heritage to be studied, visualised, curated, displayed and monitored. It is finding a way to store large amounts of data while improving the way we communicate the rich narratives of the past.

'We are losing parts of our heritage every day, for different reasons,' says INCEPTION's technical coordinator Federica Maietti, of Università degli Studi di Ferrara, Italy. 'We are looking at changing this through digitalisation. We are finding new ways to use data and store knowledge, while creating impact.'

Using 3D technology

While not new, the generation of high-quality 3D models can be expensive and time-consuming, and the digital reconstructions provided are often in formats that are not easily accessed or re-used by scholars, curators and those working in the field of cultural heritage and in the cultural industries.

Working to overcome this barrier, INCEPTION is using techniques that use 3D data capturing technologies to survey heritage buildings and sites within a holistic digital documentation procedure. These technologies can collect millions of points ¬– spatial coordinates – and the data can be integrated with GPS and indoor positioning technologies.

The project team has developed an optimised data acquisition protocol, a common procedure to collect data, and to manage issues related to the 3D survey of complex

architectures and to the large amount of captured data and an optimised 3D scanner system with time-saving procedures for data capturing and processing for heritage documentation.

The main INCEPTION innovation is the way in which different steps and processes related to the heritage digitisation and knowledge are linked together through the holistic documentation and within the open-standard semantic web platform.

The project's platform contains, visualises, manages and exchanges technical and popular information of a heritage site through 3D models. This platform can be accessed by experts, curators and interested people through mobile phones and other devices.

Widely available across Europe

INCEPTION is being rolled out across nine different sites in Europe: the Istituto degli Innocenti in Italy, the historic church of Obergum in The Netherlands, Castillo de Torrelobaton in Spain, Old Stone Villages in Dalmatia and the Technical Museum Nikola Tesla in Croatia, Church Panayia Phorviotissa in Cyprus, and in Greece the Akropolis of Erimokastro in Rhodes, Villa Klonaridi in Athens and the HAMH Museum in Hydra.

The project team chose these places to test the system on a mix of heritage sites that vary in size, type, materials, historical periods, state of conservation and needs. Maietti says that the wide variety helps the project test ways to bring together a lot of data and requirements related to heritage knowledge and understanding. The challenge encourages experts from several fields, including design, manufacturing and ICT, to collaborate in developing the 3D platform.

For example, the HAMH Museum in Hydra, Greece, stores important artifacts and historical documents from the 18th and 19th century. The project aims to create a 3D model of the museum so as to increase its visibility and attract more visitors to the museum, while improving accessibility, understanding and appreciation of the value of the building and its exhibits.

The project will develop and test a tour map app for the museum. Users will be able to access a 3D model of the museum either on the internet or by mobile applications. The team is currently testing the platform and aims to make it available to the public in 2019.

'Accessibility is INCEPTION's key word,' Maietti says. 'We want this to be used by experts, professionals, students and the general public. We want to find a way to interest young people in our past, to find ways for people who cannot leave their home to access museums, to stimulate our curiosity and to bridge the digital and real world.'

Project details
- Participants: **Italy (Coordinator)**, Slovenia, Greece, Cyprus, Spain, Netherlands, Germany, Bulgaria, France, Croatia

- Project N°: 665220
- EU contribution: € 3 990 205
- Duration: June 2015 to May 2019
- https://www.inception-project.eu/en
- http://ec.europa.eu/research/infocentre/article_en.cfm?&artid=49797&caller=FP

IPERION CH integrated platform

Integrated Platform for the European Research Infrastructure ON Cultural Heritage

The IPERION CH project is using EU funding to integrate national facilities of recognised excellence in heritage science and to connect experts from across Europe. Opening up world-class facilities to a wider number of researchers and academics will foster more collaborative work and strengthen the reputation of Europe's heritage sciences.

"If you are working on a tangible heritage project such as the restauration of a church, you might need access to several analytical tools and to consult with previous restorations," says IPERION CH project coordinator Luca Pezzati from the Consiglio Nazionale delle Ricerche in Italy. "A constant challenge for researchers in this field has been that cultural heritage is so fragmented. The tools and information a research might need are often dispersed in archives or institutions across Europe."

By achieving better coordination among institutions, Pezzati and his colleagues hope to address the issue of fragmentation and offer more comprehensive support to European cultural heritage science. "The IPERION CH infrastructure will provide access to all services, instruments and expertise from participating institutions through one access point," he explains. "This is about creating a viable research community."

Raising cultural awareness

From prehistoric cave paintings through to contemporary street art and everything in-between, Europe's cultural heritage is second to none. Conserving and restoring artworks, architecture and museum collections require expertise and resources, both of which demand investment. The IPERION CH project aims not only to make more efficient use of European knowledge and expertise, but to raise awareness of the social and economic importance of looking after our cultural heritage.

"The lack of coherence in this field has led to cultural heritage science being overlooked," says Pezzati. "When it comes to funding programmes or research priorities, cultural heritage is very rarely in the headlines. One of the reasons we wanted to create this infrastructure was to raise the profile of this field."

IPERION CH comprises 23 partners from 12 Member States plus one in the US. A large number of institutions are taking part, while many more have expressed an

interest. The project enables heritage scientist to access 19 first-class facilities grouped under three platforms: MOLAB, for portable laboratories; FIXLAB, for large-scale facilities; and ARCHLAB, for archives of technical and scientific data. Transnational access is accompanied by joint research activities, aimed at developing and improving the existing facilities, and networking activities, including training for users and scientists, dissemination and innovation.

Looking to the future

The project, which is the culmination of 15 years of closer collaboration in this field, is building on previous EU-funded cultural heritage network and infrastructure projects such as LABS-TECH, EU-ARTECH and CHARISMA.

"These have been important steps towards improving access to facilities and archives for cultural heritage researchers," says Pezzati. "This latest project, the final one in this series if you like, will establish a more permanent, recognised European infrastructure that will bring benefits for years to come."

IPERION CH, due for completion in April 2019, will eventually feed into the European Research Infrastructure for Heritage Science, E-RIHS (currently in its preparatory phase). This ambitious infrastructure project plans to integrate cultural heritage research with related disciplines, such as chemistry, art history, architecture, archaeology and digital humanities. This will facilitate more holistic research projects in the future, and put cultural heritage science on the same level as more traditional scientific disciplines. "Building up heritage science is a slow process, and IPERION CH is just another step towards our objective," says Pezzati.

Project details
- Participants: Italy (Coordinator), Belgium, Germany, Denmark, Spain, France, Greece, Hungary, Netherlands, Poland, Portugal, UK, United States
- Project N°: 654028
- EU contribution: € 7 994 987
- Duration: May 2015 to April 2019
- http://www.iperionch.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47837

PARTHENOS

Pooling Activities, Resources and Tools for Heritage research Networking, Optimization, and Synergies

Research projects in similar or related domains often face the same challenges, such as the way data are collected and managed, and how this information is made accessible to partners and end-users. Addressing these issues separately can mean duplicating efforts unnecessarily, wasting time and resources. Even worse, adopting different or contrasting solutions could eventually lead to incompatibility among certain research fields.

The EU-funded PARTHENOS is a thematic cluster which aims to support the development of two new European research infrastructures, namely, CLARIN (Language resources and Technology) and DARIAH (Digital Research Infrastructures for Art, Culture and Humanities). The project is developing common standards for collecting and processing data through coordinated joint activities that involve researchers from different disciplines, to identify and exploit areas of commonality. It will deliver guidelines, standards and methods and provide pooled services and shared solutions to the same problems.

"We believe that this approach will pave the way towards data-based interdisciplinary research across related domains," says PARTHENOS project coordinator Franco Niccolucci from the University of Florence in Italy. "Identifying commonalities and encouraging interoperability will help facilitate the exchange of information as well as data reuse."

Creating harmony across disciplines

The four-year PARTHENOS project was launched in 2015 to analyse the collection and management of data in human sciences, to find solutions that could be used in research, ranging from language studies and digital humanities to cultural heritage and history. The project is focusing on harmonising data policies, standards and data organisation.

PARTHENOS began by creating teams from different domains to explore data policies, standards and organisation. "This was our first major step towards the kind of collaboration envisaged by the project," says Niccolucci. "These teams have begun to develop possible research solutions which have been sent to users for testing and approval. On the basis of their feedback, these solutions will be adjusted or amended. We are currently in this last stage of final adjustment but have already achieved a good level of user satisfaction."

One interesting result from this process is the way that knowledge can be organised in such a way that data become interoperable, i.e. usable across different disciplines. The project has developed a joint data model to describe knowledge in the different domains, which suits the needs of all disciplines involved and thus may be used by all of them.

The wise method

"This model enables data that is created by researchers in digital humanities, for example, to be used by historians with no need for rearranging," explains Niccolucci. "This could one day mean that the model becomes a sort of lingua franca, capable of supporting cross-discipline collaboration and data reuse. We are following a bottom-up approach that starts from the viewpoint of users' needs, because we firmly believe that any proposed solutions cannot be enforced but rather must be built up through consensus and freely accepted."

This 'wise' method, as he calls it, is expressed in the project title: Parthenos is one of the names given to Athena, the Greek goddess of wisdom celebrated in the Parthenon temple in Athens.

Niccolucci is confident that the PARTHENOS project, due for completion at the end of April 2019, has already demonstrated how collaboration and data openness benefit everyone. "We hope this project will make a substantial contribution towards building a European shared data research area, the so-called European Open Science Cloud, which is one of the pillars of the European research strategy," he says.

Project details
- Participants: Italy (Coordinator), France, Netherlands, Ireland, Spain, Greece, UK, Austria, Germany
- Project N°: 654119
- EU contribution: € 11 999 711
- Duration: May 2015 to April 2019
- http://www.parthenos-project.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47756

RIBuild

Robust Internal Thermal Insulation of Historic Buildings

Countries across Europe are proud of the beauty and splendour of their historic buildings. Many are iconic and attract visitors from across the world. In fact, 30 % of buildings in Europe are historic, having been built prior to 1945. However, due to their age, these buildings do not comply with modern requirements for energy efficiency and indoor climate and are often largely uninsulated.

The external walls of historic buildings need to be fitted with energy-efficient internal insulation so that their architectural and cultural value is not compromised – but retrofitting with modern internal insulation can pose risks to the integrity of buildings related to moisture from, for example, frost damage, rot or mould growth.

To help historic buildings reach their estimated potential for energy savings of 15-20 % using internal insulation for the facades, the EU-funded RIBuild project is developing a comprehensive set of decision guidelines for the fitting of internal thermal insulation. These are expected to make it easier across Europe to successfully design and retrofit historic buildings with insulation. They take many factors into account – such as building materials and location – to ensure successful and safe internal insulation.

The guidelines will act as input for a user-friendly web tool that will provide insulation solutions for building authorities and owners. They will then be able to minimise risks and costs when fitting insulation – to reduce energy consumption and get closer to meeting EU 2020 climate and energy targets.

"The web tool will not only suggest internal insulation solutions for historic buildings but will also provide information on the environmental impact of the different solutions," says project coordinator Ernst Jan de Place Hansen of the Danish Building Research Institute at Aalborg University in Denmark.

Going deeper into insulation

To develop the guidelines, the international team of researchers is carrying out in-depth investigations into how and under what conditions internal thermal insulation can be used successfully. They are conducting on-site case studies, simulations and laboratory measurements of different materials. Their work is multi-disciplinary and

spans areas of material characterisation, building physics, energy, sustainability and statistics.

Understanding how heat and moisture move through buildings – their hygrothermal behaviour – is key to the successful installation of internal insulation that will maximise energy savings and avoid collateral damage. The team has developed a way to predict this behaviour by taking account of the variability in materials properties, environmental conditions and the uncertainties associated with insulation solutions. This information will be used in their web tool.

Lower energy consumption

"RIBuild will help building owners decide whether their historic building is suitable for internal insulation to improve its energy performance," says de Place Hansen. "Reducing energy consumption for heating, cooling, ventilation, etc. will cut CO2 emissions and thus reduce climate change."

The project has enabled an interdisciplinary team to collaborate on ideas and achieve a common goal. It has brought researchers together from across the EU and helped in the training and development of a number of PhD students.

The group has already held an open seminar at which they shared their hopes for the RIBuild project with researchers and the general public. When complete, the web tool is expected not only to be used by decision-makers at historic buildings, to help them decide on insulation options, but it will also be used as a training tool.

Project details
- Participants: Denmark (Coordinator), Latvia, Germany, Belgium, Italy, Sweden, Switzerland
- Project N°: 637268
- EU contribution: € 4 962 375
- Duration: January 2015 to December 2019
- https://www.ribuild.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47896

ROCK

Regeneration and Optimisation of Cultural Heritage in creative and Knowledge cities

Many historic city centres are afflicted by physical decay, social conflict and low living standards. Focusing on their cultural heritage is an effective starting point for their regeneration as it enables conservation and development issues to be addressed simultaneously.

The EU-funded ROCK project is compiling a set of models to meet the needs of everyone involved in culture-led urban regeneration. These include policy recommendations for tapping into the potential of cultural heritage, regeneration measures and strategies to increase investment in cultural sites. Other elements aim to involve all societal groups in heritage management and green innovation.

The models are based on successful actions implemented in Athens, Cluj, Eindhoven, Liverpool, Lyon, Turin and Vilnius. The project aims to find out how they can be replicated by testing them in real-life conditions in Bologna, Lisbon and Skopje.

In this way, ROCK raises awareness of the regeneration potential of cultural heritage and encourages more efficient heritage management. It also highlights the role of local communities in urban development and shows how cultural heritage can foster inclusion.

"We see historic city centres as laboratories of creativity through which it becomes possible to demonstrate how cultural heritage can become an engine for sustainable development and inclusive growth," says project manager Pamela Lama of the Municipality of Bologna, Italy. "Urban regeneration goes hand in hand with an environmentally friendly approach as cultural heritage is a non-renewable resource. This requires a long-term vision which considers how inhabitants and visitors can fully enjoy cultural elements, while addressing sustainable production and consumption."

Living labs

During a monitoring phase, cultural heritage data is gathered and uploaded to the ROCK web platform. It is then interpreted and used to address challenges facing historic cities. This feeds into the development of regeneration models through actions such as creating living labs in the three cities, which bring together people

from different backgrounds to share ideas for design of cultural services and shaping of the cities' future development.

The cities also host workshops and seminars where students work on themes like eco-innovation and business incubation. Within all of these events, ROCK researchers organise training activities, including mentoring visits and webinars.

Socio-economic benefits

Aiming to produce both social and economic benefits, ROCK links the two closely. "ROCK is based on a conceptual framework in which every part – culture, creativity, environment, security, knowledge and regeneration – works as a kind of gear mechanism, creating the conditions to ensure safer, healthier and more suitable places for people to live and work," Lama says. "This makes historic city centres more attractive to investors in cultural heritage, which is a growing sector that creates jobs."

The methodology and results will be shared widely to provide a basis for further debate on new operational models for cultural heritage and ways of linking it with sustainability.

Within the project, the web platform ensures knowledge transfer between cities, industries and public bodies. Each result will also be disseminated through channels, including events during the 2018 European Year of Cultural Heritage, publications and existing fora, as well as during ROCK's own activities.

Project details
- Participants: **Italy (Coordinator)**, Belgium, Switzerland, Germany, Spain, France, Greece, Lithuania, the Former Yugoslav Republic of Macedonia, the Netherlands, Portugal, Romania, United Kingdom
- Project N°: 730280
- EU contribution: € 9 873 585
- Duration: May 2017 to April 2020
- https://rockproject.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47936

STORM

STORM

Safeguarding Cultural Heritage through Technical and Organisational Resources Management

Imagine Rome without the Colosseum, Athens without the Acropolis, or London without the iconic Tower Bridge. These sites, and many more like them, are all part of Europe's rich cultural heritage. Churches, castles, museums and archaeological remains are a vital cultural legacy for local and national populations. They also boost the economy by bringing in valuable tourism.

Unfortunately, like many culturally important sites around the world, the historic locations of Europe are under threat from natural forces, made worse by climate change. Storms bring damaging high winds and rain. Rising seas and floods can weaken, erode or destroy precious artefacts. Priceless paintings and frescoes can be ruined by damp, while earthquakes and forest fires can bring total devastation. Even seemingly harmless trees and plants can quickly overrun and damage vulnerable structures.

Although some countries have put plans in place to preserve their most important icons, little has been done on a Europe-wide basis to secure the continent's rich cultural heritage in a changing world. The EU-funded STORM project is aiming to change that by developing methods, tools and policies to safeguard this irreplaceable legacy for the future.

"One of the most important values in Europe is our cultural heritage," says project co-ordinator Silvia Boi of Engineering Ingegneria Informatica, Italy. "All of the cultural heritage sites in Europe have in some way been affected by climate change and natural disasters. We need to try to save them, to protect our cultural identities."

Measuring and monitoring

Using five sites located in Italy, Portugal, Turkey, Greece and the UK as case studies, the project is developing methods and technologies to monitor and evaluate the impact of natural forces on historic cultural sites in real time. This information will be used to develop international policies and plans to protect them as the environment and climate changes.

STORM is a multi-disciplinary project bringing together researchers from a wide range of disciplines, including curators, conservators, architects, archaeologists, engineers and risk management specialists. Together, these experts are developing techniques for measuring the impact of different risk factors at the sites.

For example, the impressive Baths of Diocletian in Rome date back to the 3rd century AD. But they are close to the city's busy metro system and can be buffeted by high winds and storms. This causes vibrations that can make the walls unstable and dangerous. The STORM team is installing optical fibres under the site to measure vibrations, helping the site's management to monitor and predict any potentially damaging changes.

Tróia in Portugal is another ancient Roman site, close to the sea and affected by erosion and flooding. High humidity and rapidly growing vegetation are also putting ancient frescoes and structures at risk. The team is installing sensors to measure sea height and humidity, as well as tools to monitor the invasion of plants and other biological pests.

Sourcing and sensing

As well as bringing together professional specialists from a range of disciplines, STORM is using the power of crowdsourcing and crowdsensing, taking advantage of high tourist traffic to help keep an eye on these important sites. Visitors can use a smartphone app to take photos and add relevant information to the monitoring system. Add-on phone sensors can be used to provide data about the environment, too.

The information from all these sources is being gathered together to build a real-time early-warning system. This alerts site managers to the first signs of potential problems and provides information about how best to protect and preserve their irreplaceable cultural assets.

"I live in Pisa and I can't imagine the city without the leaning tower," says Boi. "It's important for populations to protect their cultural heritage, but there is currently no solution that gives a picture of what is happening right now at these historic sites. I'm excited because STORM is providing integrated systems that will enable decisions to be made to protect them in the future."

Project details
- Participants: Italy (Coordinator), Portugal, Greece, Uk, Germany, Austria, Turkey
- Project N°: 700191
- EU contribution: € 7 297 875
- Duration: June 2016 to May 2019
- http://www.storm-project.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47916

TRACES

Transmitting Contentious Cultural Heritages with the Arts: From Intervention to Co-Production

Europe's cultural heritage is complex, with conflicting perspectives on different historical events. Although it is hard to convey the various layers of such contention to a wide audience, failure to do so can impede the development of good relations.

The EU-funded TRACES project aims to formulate art- and research-based strategies for transmitting difficult aspects of cultural heritage in a sensitive manner. In so doing, it contributes to a process of reflection and dialogue between people of opposing viewpoints, aiming to increase self-awareness and helping to develop a collective European consciousness.

TRACES has launched five creative co-productions (CCPs) focusing on selected examples of contentious heritage in which artists confront these issues through experimental art. This is backed up by theoretical investigation by heritage providers and academics to enable cultural institutions to find new ways of framing controversial issues.

"We try to break down contentious aspects of cultural heritage through long-term projects in specific settings," explains assistant project coordinator Gisela Hagmair of the University of Klagenfurt in Austria. "Within these projects, artists, researchers and heritage providers work together to build CCPs, using artistic freedom to address uncomfortable matters and thus initiate a public discussion."

Five examples

The five examples chosen as case studies for development of heritage transmission approaches are: the abandoned synagogue which housed the archives of the Jewish community of Mediaş, Romania; Eastern European vernacular art on the Holocaust; death masks and use of the representation of death in the process of European identity-making; collections of human skulls kept by public institutions for the study of individuals and ethnic groups; and the Long Kesh/Maze prison which housed

political prisoners during the conflict over the constitutional status of Northern Ireland (the Troubles).

These examples are being analysed with a focus on issues including the way in which art and research interact, treatment of educational aspects and stakeholder involvement, and the implications for the arts of the CCP model. The work is also considered in relation to the organisation of museums and the way in which everyday creative practices can support reflection on contentious cultural heritage.

Other benefits

According to Hagmair, the CCP concept can be used in other contexts to encourage groups of people who are in conflict to talk. Moreover, an important side effect is that, as the CCPs last at least three years, they can bring benefits in areas such as tourism, as in the case of the Mediaş synagogue.

Thanks to TRACES, a building that was previously abandoned has become a hub for cultural activities, exhibitions, art workshops and concerts related to the history of the city's Jewish community and its disappearance. The project also gives the artists themselves a boost.

"Artists often work under precarious conditions and usually only have a short time for projects – about two or three weeks on average," says Hagmair. "With TRACES, they are employed for three years on a basic income that gives them time to concentrate on the topic instead of being forced to look around for their next project. Hence, the CCP model creates a more secure working environment for artists in the field of heritage transmission."

Project details
- Participants: **Austria (Coordinator)**, Italy, Germany, Norway, Switzerland, Romania, UK, Poland, Slovenia
- Project N°: 693857
- EU contribution: € 2 303 358
- Duration: March 2016 to February 2019
- http://www.traces.polimi.it/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47797

UNREST

Unsettling Remembering and Social Cohesion in Transnational Europe

Much of the EU's legitimacy is derived from the idea of peace and prosperity brought about by reconciliation following World War II. This is now being challenged by nationalist movements who are using the memory of war to promote confrontation-based notions of belonging.

The EU-funded UNREST project aims to counter these antagonistic forms of memory in a way that cosmopolitan forms – such as those upon which the EU is based – cannot, by developing a third way which it calls 'agonistic memory'.

Viewing political conflict as an opportunity for emotional and ethical growth, agonistic memory aims to re-politicise memory and increase social cohesion around it. This happens by democratically channelling opposed views, political passions and social imagination through an adversarial dynamics of public contest and confrontation.

'Agonistic memory' is thus better able to engage with nationalist memory politics and to find ways of overcoming it. To formulate the concept, the project combines theoretical reflection with studying memory cultures and testing practices.

"The research addresses the problem of how to remember violent conflict. Nationalist memory politics is on the rise across Europe and our research aims to contribute to mechanisms that can defeat it," says coordinator Stefan Berger of Ruhr University Bochum in Germany. "Our results show that memory politics surrounding war in Europe are determined by antagonisms and cosmopolitanism. Cosmopolitan memory frames are, however, relatively powerless in countering nationalist memory politics as they refuse to engage with them."

Cultural studies

UNREST is hoping to get a clearer idea of dominant modes of remembering by examining mass grave exhumations and war museums. It is looking at the exhumation of graves of civilians killed in Poland during World War II, the Spanish

Civil War and the Bosnian War, exploring how they elicit different forms of remembering and the memory practices and narratives arising from them.

The history, reception, narrative, aesthetics and political-cultural contexts of five war museums – the Historial de la Grande Guerre in Péronne, France, the Kobarid Museum in Slovenia, the German-Russian Museum in Berlin, Oskar Schindler's Factory in Krakow and the Military History Museum in Dresden – are being analysed in depth. This is mainly achieved by research and interviews with people involved in creating and running the museums, as well as visitors.

Work on exhumations and museums feeds into the development, testing and dissemination of approaches aimed at promoting more reflective memory practices. A key part of this is creation of a museum exhibit and a theatre performance.

The exhibit at the Ruhr Museum in Essen, Germany showcases opposing opinions about different 20th century wars, without *a priori* favouring one perspective over another. Thus, it provides a space for testing new memory strategies.

The theatre performance is intended to challenge audiences on issues such as guilt, justice and revenge, and relations between perpetrators, bystanders and victims. Discussions and interviews reveal how people of different genders, ages and cultural backgrounds respond. It will be staged before an audience in Spain, while three screenings are planned for policymakers, cultural heritage professionals and memory activists in Bosnia and Herzegovina, Poland and Spain.

"The play can be used by other theatre companies across Europe," says Berger. "The results of the research will be made available through scholarly articles to the research community. Stakeholders will be informed of results via social media and a regular newsletter. We also develop teaching materials to encourage more agonistic approaches to memory politics."

Project details
- Participants: **Germany**, Denmark, Spain, Poland, United Kingdom
- Project N°: 693523
- EU contribution: € 2 489 648
- Duration: April 2016 to March 2019
- http://www.unrest.eu/
- http://ec.europa.eu/research/infocentre/article_en.cfm?artid=47676

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