

D 1.3

Final survey of the experiences and technology state of the art



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Appendix 3 – Common framework – Best practices

Appendix 4 – Common framework – All sources

Appendix 5 – Crossed analysis of skills and best practices in the field of Conservation, Preservation and Valorisation of monuments and sites

Appendix 1 – Index – all sources

Best-Practices			
Code	Title	Country	EU / outside the EU
BP_001	Altenburg Abbey, Altenburg	Austria	European Union
BP_002	Ename Abbey, Ename	Belgium	European Union
BP_003	Horta Museum, Brussels	Belgium	European Union
BP_004	Mostar Bridge, Mostar	Bosnia and Herzegovina	Outside the European Union
BP_005	Choirokoitia Archaeological Site, Choirokoitia	Cyprus	European Union
BP_006	Pafos Gate, Nicosia	Czech Republic	European Union
BP_007	Troodos Churches, Troodos	France	European Union
BP_008	Villa Tugendhat, Brno	France	European Union
BP_009	Luma, Arles	France	European Union
BP_010	Jardin des Vestiges, Marseilles	France	European Union
BP_011	Festival of Lights, Lyon	France	European Union
BP_012	Palace of the Popes, Avignon	France	European Union
BP_013	Bagrati Cathedral, Kutaisi	Georgia	Outside the European Union
BP_014	Bauhaus building, Dessau	Germany	European Union
BP_015	Congress Hall, Nuremberg	Germany	European Union
BP_016	Neues Museum, Berlin	Germany	European Union
BP_017	Park of the Varus Battle, Kalkriese, Bramsche	Germany	European Union
BP_018	Topography of Terror, Berlin	Germany	European Union
BP_019	Basilica Palladiana, Vicenza	Italy	European Union
BP_020	Cestia Pyramid, Rome	Italy	European Union
BP_021	Forum of Augustus, Rome	Italy	European Union
BP_022	Great Pompeii Project	Italy	European Union
BP_023	Malatestiana Library, Cesena	Italy	European Union
BP_024	MUBIG, Milan	Italy	European Union
BP_025	Officine Grandi Riparazioni, Turin	Italy	European Union
BP_026	Ospedale degli Innocenti, Florence	Italy	European Union
BP_027	Piazza Rossini, Bologna	Italy	European Union
BP_028	San Saba Oratory, Rome	Italy	European Union
BP_029	Santa Marta Barracks, Verona	Italy	European Union
BP_030	Temple Cathedral, Pozzuoli	Italy	European Union
BP_031	Trevi Fountain, Rome	Italy	European Union
BP_032	Troisi Cinema, Rome	Italy	European Union
BP_033	Urbino Colleges, Urbino	Italy	European Union
BP_034	Villa Contarini, Piazzola sul Brenta (PD)	Italy	European Union
BP_035	São Roque Chapel, Lisbon	Portugal	European Union
BP_036	Celica Hostel, Ljubljana	Slovenia	European Union
BP_037	Casa Batlló, Barcelona	Spain	European Union
BP_038	Galera, Granada	Spain	European Union
BP_039	Matadero, Madrid	Spain	European Union
BP_040	Shelter for Roman Ruins, Chur	Switzerland	Outside the European Union
BP_041	Streetmuseum, London	United Kingdom	Outside the European Union
BP_042	The Lost Palace, London	United Kingdom	Outside the European Union

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VVAA_2010	Vv.Aa., <i>Lima Declaration for Disaster Risk Management of Cultural Heritage</i> , 2010, https://www.icomositalia.com/files/ugd/57365b_452c480e9ba54686ba2f6c22b0d52b9e.pdf .
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Documents	
Code	Title
VVAA_2017	European Commission, <i>Mapping of Cultural Heritage actions in European Union: policies, programmes and activities</i> , 2017, https://ec.europa.eu/assets/eac/culture/library/reports/2014-heritage-mapping_en.pdf .
VVAA_2018	Vv.Aa., <i>Adaptive Re-Use of the Built Heritage: Preserving and Enhancing the Values of our Built Heritage for Future Generations</i> , Leeuwarden Declaration, 2018, https://www.ace-cae.eu/fileadmin/New_Upload/15_EU_Project/Creative_Europe/Conference_Built_Heritage/LEEWARDEN_STATEMENT_FINAL_EN-NEW.pdf .
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European Projects		
Code	Acronym	Title
EP_001	4CH	Competence Centre for the Conservation of Cultural Heritage
EP_002	ACTECH	Ancient ConstructionTECHniques between East and West. Building traditions, technological innovations and workmanship circulation: from Roman Arabia to Medieval Europe.
EP_003	APACHE	Active & intelligent PACKaging materials and display cases as a tool for preventive conservation of Cultural Heritage.
EP_004	ARCH	Advancing Resilience of Historic Areas against Climate-related and other Hazards
EP_005	ARCHES	Accessible Resources for Cultural Heritage EcoSystems
EP_006	ATHENA	Remote Sensing Science Center for Cultural Heritage
EP_007	AVATAR	Application of Virtual Anastylis Techniques for Architectural Research
EP_008	Be.CULTOUR	Beyond CULTural TOURism: human-centred innovations for sustainable and circular cultural tourism
EP_009	BIONA4ART	BIO-inspired NACre-like materials FOR the next generation of conservation treatments in stone ART works
EP_010	CALI	The Cambodian Archaeological Lidar Initiative: Exploring Resilience in the Engineered Landscapes of Early SE Asia
EP_011	CATHEDRAL ACOUSTICS	Sound as Intangible Heritage: Preserving the Acoustics of Cathedrals in the United Kingdom
EP_012	CENTRINNO	New CENTRAlities in INDustrial areas as engines for inNOvation and urban transformation
EP_013	CHANGE	Cultural Heritage Analysis for New GEneration
EP_014	CHEurope	Critical Heritage Studies and the Future of Europe_Towards an integrated, interdisciplinary and transnational training model in cultural heritage research and management
EP_015	CHICC	Culture, Heritage and Identities: Impacts of Climate Change in North West Europe
EP_016	CLEA	Reviewing and integrating methods for the Conservation of European architectural finishes in urban hEritage townscape
EP_017	CLIC	Circular models Leveraging Investments in Cultural heritage adaptive reuse
EP_018	COASTAL	Collaborative lAnd Sea inTegration pLatform
EP_019	CONCHA	The construction of early modern global Cities and oceanic networks in the Atlantic: An approach via Ocean's Cultural HeritAge
EP_020	conFiRMa	Strengthening of existing masonry buildings with Fibre-Reinforced Mortar: calibration of a reliable numerical model to assess the structural performances
EP_021	CONQUES	Conques in the Global World. Transferring Knowledge: from Material to Immaterial Heritage
EP_022	Constr-HaVi	Construction techniques, experimentation and innovative architectural solutions at Hadrian's Villa (Tivoli, Italy)
EP_023	CRAFT	Cartonnage Regionalism in the Ateliers of the Fayum Territory
EP_024	DaphNet	Dynamic Preservation of Interactive Art: The next frontier of Multimedia Cultural Heritage
EP_025	DEPART	Digging in Early Picasso's Artworks: Making and Meaning Research Forum
EP_026	DFitHH	Digital Forensics in the Historical Humanities: Hanif Kureishi, The Mass

European Projects		
Code	Acronym	Title
		Observation Archive, Glyn Moody
EP_027	DigiArt	The Internet Of Historical Things And Building New 3D Cultural Worlds
EP_028	DUEL	Fighting with Words: Poetic Duelling and its Performance across the Mediterranean
EP_029	DURARE	DYNAMICS OF THE DURABLE. A History of Making Things Last in the Visual and Decorative Arts.
EP_030	ECOPOTENTIAL	ECOPOTENTIAL: Improving Future Ecosystem Benefits Through Earth Observations
EP_031	ED-ARCHMAT	European Doctorate in ARchaeological and Cultural Heritage MATerials science
EP_032	EGYPTOMICS	Paleoproteomics for cultural heritage conservation: biomolecular analysis of ancient Egyptian paint binders
EP_033	eHERITAGE	Expanding the Research and Innovation Capacity in Cultural Heritage Virtual Reality Applications
EP_034	EMOTIVE	Emotive Virtual cultural Experiences through personalized storytelling
EP_035	ENGHUM	Engaged humanities in Europe: Capacity building for participatory research in linguistic-cultural heritage
EP_036	E-RIHS PP	The European Research Infrastructure for Heritage Science Preparatory Phase
EP_037	ERN-Apulia	European Researchers' Night Apulia 2018-2019 - Discovering the fascinating world of research
EP_038	ERN-Apulia2	European Researchers' Night Apulia 2020 - Discovering the fascinating world of research
EP_039	EU-LAC-MUSEUMS	Museums and Community: Concepts, Experiences, and Sustainability in Europe, Latin America and the Caribbean
EP_040	FAWORIT 2018-2019	Fascinating World of Researchers in the Age of Technology – Cultural Heritage & the New Generation of Innovators
EP_041	FLOS	Florilegia Syriaca. The Intercultural Dissemination of Greek Christian Thought in Syriac and Arabic in the First Millennium CE
EP_042	FORPRAL	Forbidden Prayers Library. Shaping Private Piety in Counter-Reformation Europe (16th-18th)
EP_043	FRAMAB	Flood Risk Assessment and mitigation for Masonry Arch Bridges
EP_044	FUTURES	Forefront UAV Technology for Underpinning Rainforest Environmental Sustainability
EP_045	Geopark	Geoparks: Heritage, Education and Sustainable Development - an Innovative Methodology for Southern Countries. Case Study in Morocco (Atlas Mountains, Marrakech)
EP_046	GIFT	Meaningful Personalization of Hybrid Virtual Museum Experiences Through Gifting and Appropriation
EP_047	GRAVITATE	Geometric Reconstruction And novel semantic reunification of cultural heritage objects
EP_048	HAP4MARBLE	Multi-functionalization of hydroxyapatite for restoration and preventive conservation of marble artworks
EP_049	HeLLO	Heritage energy Living Lab onsite
EP_050	HERACLES	HERitage Resilience Against CLimate Events on Site
EP_051	HeriCare	2D Materials/Polyoxometalate Hybrids for Heritage Conservation
EP_052	HERILAND	Cultural HERItage and the planning of European LANDscapes

European Projects		
<i>Code</i>	<i>Acronym</i>	<i>Title</i>
EP_053	HERITAGE	Cultural Heritage and Economic Development in International and European Law
EP_054	HERItage	The role of cultural heritage in socio-economic development and preservation of democratic values
EP_055	HiLSS	Historic Landscape and Soil Sustainability
EP_056	HISMACITY-pro	Historical Small Smart City Protocol for integrated interventions.
EP_057	HOLAHERIS	A holistic structural analysis method for cultural heritage structures conservation
EP_058	HUB-IN	Hubs of Innovation and Entrepreneurship for the Transformation of Historic Urban Areas
EP_059	HYPERION	Development of a Decision Support System for Improved Resilience & Sustainable Reconstruction of historic areas to cope with Climate Change & Extreme Events based on Novel Sensors and Modelling Tools
EP_060	HYSOTIB	Global dynamics of hydro-sociality in river heritage landscapes of the Qinghai Tibetan Plateau.
EP_061	ILLR	Intellectual Life and Learning on Rhodes (168BC-AD44)
EP_062	ILUCIDARE	International network for Leveraging sUccessful Cultural heritage Innovations and Diplomacy, cAPacity building and awaREness raising
EP_063	iMARECULTURE	Advanced VR, iMmersive serious games and Augmented REality as tools to raise awareness and access to European underwater CULTURal heritage.
EP_064	INCEPTION	Inclusive Cultural Heritage in Europe through 3D semantic modelling
EP_065	InnovaConcrete	Innovative materials and techniques for the conservation of 20th century concrete-based cultural heritage
EP_066	INTERFACE	paINTed mEtal aRteFActs ConsERvation
EP_067	IPERION CH	Integrated Platform for the European Research Infrastructure ON Cultural Heritage
EP_068	IPERION HS	Integrating Platforms for the European Research Infrastructure ON Heritage Science
EP_069	ISLAPAP	Understanding the Material Culture of Islamic Paper and Inks
EP_070	iv4XR	Intelligent Verification/Validation for Extended Reality Based Systems
EP_071	K-TRIO 3	Researchers in the knowledge triangle
EP_072	LArchHer	Breaking barriers between Science and Heritage approaches to Levantine Rock Art through Archaeology, Heritage Science and IT
EP_073	LAWHA	Lebanon's Art World at Home and Abroad: Trajectories of artists and artworks in/from Lebanon since 1943
EP_074	LEAP	LEarning of Archaeology through Presence
EP_075	LightFasTR	Understanding the light-fastness of heritage Turkey Red textiles through modern dye chemistry and historical dyeing technology to inform sustainable display and access
EP_076	LUDEME	The Digital Ludeme Project: Modelling the Evolution of Traditional Games
EP_077	MAPS	A Multifactorial Analysis of Possessive Structures: Mapping the Interaction of Language, Culture, and Cognition
EP_078	MarginScapes	Long-term land use and water management strategies in arid margin landscapes




European Projects		
Code	Acronym	Title
EP_079	MEDICINE	MEDICINE. Indigenous concepts of health and healing in Andean populations: understanding the relevance of traditional MEDICINE in a changing world.
EP_080	MEDLAND_HORN.AFRICA	Medieval landscapes in the Horn of Africa. State, territory and materiality of the Adal Sultanate (15th-16th centuries AD)
EP_081	MendTheGap	Smart Integration of Genetics with Sciences of the Past in Croatia: Minding and Mending the Gap
EP_082	METAPHOR	People, Space and Time: Understanding metaphors in sustaining cultural landscapes
EP_083	MEXRES	Restoration and Faith: practicing religion and conservation in Mexico's historic churches
EP_084	Mingei	Representation and Preservation of Heritage Crafts
EP_085	MuMoSiSt	Multidisciplinary approach to multilayer monumental sites studies: the case of the Quirinal Hill in Rome
EP_086	NACCA	New Approaches in the Conservation of Contemporary Art
EP_087	NANO-CATHEDRAL	Nanomaterials for conservation of European architectural heritage developed by research on characteristic lithotypes
EP_088	NANOMORT	Development of a novel and ecologic mortar based on nanoparticles of lime and organic additives for the repair of Built Heritage and new construction
EP_089	NANORESTART	NANOMaterials for the REStoration of works of ART
EP_090	NEGOTIA	Negotiating Religion: Coptic Orthodox diaspora communities. Shifting identities, needs, and relations from Egypt to Europe and back
EP_091	NEMOSINE	Innovative packaging solutions for storage and conservation of 20th century cultural heritage of artefacts based on cellulose derivate
EP_092	NeopLAT	Neoplatonism and Abrahamic Traditions. A Comparative Analysis of the Middle East, Byzantium and the Latin West (9th-16th Centuries)
EP_093	NewsEye	NewsEye: A Digital Investigator for Historical Newspapers
EP_094	OCHER	Owners of a Common Heritage. Commons, Environment and Rights in European Mountains (18th - 20th century)
EP_095	ODEEUROPA	ODEEUROPA: Negotiating Olfactory and Sensory Experiences in Cultural Heritage Practice and Research
EP_096	OpenHeritage	Organizing, Promoting and ENabling HERitage Re-use through Inclusion, Technology, Access, Governance and Empowerment
EP_097	PALAMUSTO	Research and Training for the Palace Museum of Tomorrow
EP_098	PAPHOS	Parallel photogrammetry system for object panoramas
EP_099	PARCA	Advance in Proteomics and Analysis of dyes and Recovery of Charred and Aged textiles
EP_100	PARTHENOS	Pooling Activities, Resources and Tools for Heritage E-research Networking, Optimization and Synergies
EP_101	PERICLES	PrEseRvIng and sustainably governing Cultural heritage and Landscapes in European coastal and maritime regions
EP_102	PICTURING	Post-Industrial Chimneys seen Through Urban Regeneration Imaginaries: toward a Networked GeoHumanities
EP_103	PLUGGY	Pluggable Social Platform for Heritage Awareness and Participation
EP_104	POCITYF	A POSitive Energy CITY Transformation Framework

European Projects		
Code	Acronym	Title
EP_105	Polifonia	Polifonia: a digital harmoniser for musical heritage knowledge
EP_106	PRESIOUS	PREdictive digitization, reStoration and degradatIOn assessment of cultUral heritage objectS
EP_107	PRO-Heritage	PROtect traditional built HERITAGE Skills – PRO-Heritage
EP_108	PROMETHEUS	PROtocols for information Models librariEs Tested on HERitage of Upper Kama Sites
EP_109	RAMBEA	Realistic Assessment of Historical Masonry Bridges under Extreme Environmental Actions
EP_110	REACH	Re-designing access to CH for a wider participation in preservation, (re)use and management of European culture
EP_111	READ	Recognition and Enrichment of Archival Documents
EP_112	ReFocuS 2.0	Road to Friday of Science 2.0
EP_113	ReInHerit	Redefining the future of cultural heritage, through a disruptive model of sustainability
EP_114	ReMIND	Reactivating Neglected Heritages, Reweaving Unspoken Memories. A Study on the Adaptive Reuse of Former Asylums into “mind museums”.
EP_115	ReMTW	Re-making the World: Women, Humanitarian Agencies and Handicrafts Programmes
EP_116	RESALVE	The Revival of Salve Regina. Medieval Marian chants from Aveiro: musical sources, gender specific context and performance
EP_117	RESEARCH	REmote SEnsing techniques for ARCHaeology
EP_118	REVEAL	Realising Education through Virtual Environments and Augmented Locations
EP_119	ROCK	Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities
EP_120	rurALLURE	Promotion of rural museums and heritage sites in the vicinity of European pilgrimage routes
EP_121	Scan4Reco	Multimodal Scanning of Cultural Heritage Assets for their multilayered digitization and preventive conservation via spatiotemporal 4D Reconstruction and 3D Printing
EP_122	SCICITY	Science in the City
EP_123	SCIMFONICO M2018-19	SCIENCE IN MOTION FOR FRIDAY NIGHT COMMOTION
EP_124	SCINAT	Science and Nature
EP_125	SCORE	Sustainable CONservation and REstoration of built cultural heritage
EP_126	SEMICOMPLE X	Divide and conquer ab initio semiclassical molecular dynamics for spectroscopic calculations of complex systems
EP_127	SensMat	Preventive solutions for Sensitive Materials of Cultural Heritage
EP_128	SHELTER	Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community based Resilience
EP_129	SHERIF	reSearch is sERious Fun
EP_130	SILKNOW	Silk heritage in the Knowledge Society: from punched cards to big data, deep learning and visual / tangible simulations
EP_131	SMARTCULTURE	SMART CULTURE
EP_132	SmARTS	Smart technology for analysis and monitoring of Cultural Heritage materials

European Projects		
<i>Code</i>	<i>Acronym</i>	<i>Title</i>
EP_133	SMOOHS	Smart Monitoring of Historic Structures
EP_134	SOCIETY	How do you spell RESEARCH? SOCIETY - Science, histOry, Culture, muslc, Environment, arT, technologY
EP_135	SoPHIA	SOCIAL PLATFORM FOR HOLISTIC HERITAGE IMPACT ASSESSMENT
EP_136	STABLE	STructural stABiLity risk assEssment
EP_137	STORM	Safeguarding Cultural Heritage through Technical and Organisational Resources Management
EP_138	SWORM	Stone-working across the ancient Mediterranean. Building techniques, artisans and cultural identities: a view from North Africa
EP_139	SYDDARTA	SYstem for Digitization and Diagnosis in ART Applications
EP_140	T4C	PhD Technology Driven Sciences: Technologies for Cultural Heritage
EP_141	TECTONIC	TEchnological Consortium TO develop sustainAbllity of underwater Cultural heritage
EP_142	TEMPERA	Teaching Emerging Methods in Palaeoproteomics for the European Research Area
EP_143	Terpsichore	Transforming Intangible Folkloric Performing Arts into Tangible Choreographic Digital Objects
EP_144	TexMeroe	Archaeology of Textile Production in the Kingdom of Meroe New approaches to cultural identity and economics in ancient Sudan and Nubia
EP_145	T-Factor	Unleashing future-facing urban hubs through culture and creativity-led strategies of transformative time
EP_146	ThinkNature	Development of a multi-stakeholder dialogue platform and Think tank to promote innovation with Nature based solutions
EP_147	Time Machine	Time Machine : Big Data of the Past for the Future of Europe
EP_148	TISCH	Terahertz Imaging and Spectroscopy for Cultural Heritage
EP_149	TITANIUM	Software Components for Robust Geometry Processing
EP_150	TRACTION	Opera co-creation for a social transformation
EP_151	TROMPA	Towards Richer Online Music Public-domain Archives
EP_152	UNCHARTED	UNCHARTED: Understanding, Capturing and Fostering the Societal Value of Culture
EP_153	V4Design	Visual and textual content re-purposing FOR(4) architecture, Design and video virtual reality games
EP_154	VHH	Visual History of the Holocaust: Rethinking Curation in the Digital Age
EP_155	Warmest	IoW Altitude Remote sensing for the Monitoring of the state of Cultural hEritage Sites: building an inTEgrated model for maintenance.
EP_156	XPECAM	A New Portable Spectral Camera System for the Cultural Heritage Conservation Market

Appendix 2 – Best practices sheets

1. CASE STUDY (INTRODUCTION)		BP_001
Best practice ref. <i>identification code (add text)</i>	BP_001	
Object <i>object of the case study (add text)</i>	ALTENBURG ABBEY, ALTENBURG, AUSTRIA	
Intervention <i>subject of the case study (add text)</i>	Reinterpretation of the open spaces and relationship between old and new in a Medieval abbey	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2002
	End date	2012
Actors <i>main actors involved (add text)</i>	Jabornegg & Pálffy Architects, Claudia Riff-Podgorschek (freelance restorer/conservator of wallpaintings and architectural surfaces), Vasko & Partner and Karlheinz Wagner (structural engineers), DI Walter Prause (for the building physics), Vasko & Partner (for the building services), Kittenberg Erlebnispark (for landscaping), Franz Hofstätter (for the site supervision)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>After the competition won by Jabornegg & Pálffy Architects in 2012, the design phase of the Altenburg Abbey restoration was carried out between 2002 and 2012, accompanied by the construction phase between 2004 and 2012. Winner of the International Architecture Restoration Prize 2012 "Fassa Bortolo Domus Restoration and Preservation", the restoration project of the Altenburg Abbey focused on the open spaces and the monastic building for its reconversion into a museum. The abbey's main prospect was balanced by extensive open spaces, with a terrace which offered a pleasant view of the surrounding countryside and a good vantage point from which to observe the abbey's impressive façades. Its structural foundation was an embankment, raised above part of the Medieval abbey, whose weight, in the 1990s, increasingly threatened the stability of the terrace's supporting walls. To relieve the pressure on existing structures and ensure building safety, the embankment was hallowed out in 2000. Various layers of medieval remains came to light. These medieval areas are now used as museum spaces, forming coherent extension of the exhibition areas already established in the main complex. To shelter the remains, a terrace was once again installed at the same level as the adjoining Baroque-era courtyards. While giving the excavation area a clear profile, the terrace also serves as a spacious thoroughfare, translating the architectural idiom of the Baroque into modern terms. Each phase in the abbey's architectural history stands out clearly in the individual sections of the building. The new museum complex's lobby is the only place where the Baroque idiom effectively overwrote the Medieval origin, with the new Baroque design blanketing out the medieval church interior. The decision made about how to restore the components of the asset were based on the notion that they form an integral part of a long history of changes the building has gone through: a balance needed to be maintained.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> https://www.premiorestauro.it/documents/69803/89009/Jabornegg+board_s_.pdf/a7ffeed2-3d5b-4259-9e08-3a0456002a12 https://it.wikipedia.org/wiki/Abbazia_di_Altenburg 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	
Keywords	Ancient constructions	

<i>transversal tags among different fields of research</i> <i>(add text)</i>	Conservation Preservation Valorisation
Image/s of the best practice nr. 1/3 image/s to identify the type of best practice	<div>  </div> <div> https://www.premior-estauro.it/documents/69803/89009/Jabor-negg+boards_.pdf/a7ffeed2-3d5b-4259-9e08-3a0456002a12 </div> <div>  </div> <div> https://www.premior-estauro.it/documents/69803/89009/Jabor-negg+boards_.pdf/a7ffeed2-3d5b-4259-9e08-3a0456002a12 </div> <div>  </div> <div> https://www.premior-estauro.it/documents/69803/89009/Jabor-negg+boards_.pdf/a7ffeed2-3d5b-4259-9e08-3a0456002a12 </div>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Altenburg
		Address	Abt-Placidus-Much-Straße 1
		Country	Austria
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Exposive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Benedictine monastery
		Century	12th-20th century
		Start year	1144
		End year	1940
		Function	Housing
		Century	20th century
		Start year	1945
		End year	
		Function	Monastery
		Century	20th century
		Start year	1947-1968
		End year	
		Function	Museum
		Century	21st century
		Start year	2012
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Foundation
		Actor	Countess Hildeburg of Poigen-Rebgau
		Century	12th century
		Start year	1144
		End year	1144
		Event	Destruction
		Actor	Swedes
		Century	17th century
		Start year	1645
		End year	1645
		Event	Reconstruction
		Actor	Architect Joseph Munggenast
		Century	17th-18th century
		Start year	
		End year	
		Event	Occupation
		Actor	Nazi party assault teams
		Century	20th century
		Start year	1938
		End year	1940
		Event	Closure and dissolution
		Actor	Nazis
		Century	20th century
		Start year	1940
		End year	1941
		Event	Occupation
		Actor	Soviet troupes
		Century	20th century
		Start year	1945
		End year	

	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event Actor Century Start year End year	Restoration and re-establishment of the monastic community Abate Maurus Knappek 20th century 1947 1968
	Investigation status (select from list)	Un-documented Archived Studied	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Spiritual value

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features Art works Eco-facts Ethnographic Historic replica Utilitarian Written evidences
		Immovable	Carved Frescoes Graffiti Mosaics
		Digital	Art Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list)	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	

OTHER	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_001

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Open Spaces		
	Whole complex		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Bricks, tiles	
	Concrete	Concrete	
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Steel	
	Paints, varnishes and enamels		
	Plasters	Plaster, stucco	
	Polymeric materials		
	Marbles, travertines, stones and granites	Stones	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)	
Anthropic risks (heritage management)			
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Diagnostic activities; Pre-consolidation, cleaning, consolidation and protection of CH materials;

		<i>standards, replicable strategies)</i>	Reinforcement of CH buildings; Project of restoration; Adaptive re-use of CH; Accessibility
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	



Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

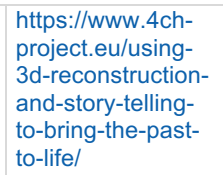
4. SYNTHESIS SHEET

BP_001

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			Activities				
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities			Skills on taking care of Cultural Heritage materials	
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials	
			• Reinforcement of CH buildings			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Reconstruction				
			• Adaptive re-use of CH			Skills on implementing measures to encourage people to practice heritage	
			• Accessibility			Skills on implementing measures to encourage people to practice heritage	
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_002
Best practice ref. <i>identification code (add text)</i>	BP_002	
Object <i>object of the case study (add text)</i>	ENAME ABBEY, ENAME, BELGIUM	
Intervention <i>subject of the case study (add text)</i>	Virtual reconstruction of a village and its abbey	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2015
	End date	—
Actors <i>main actors involved (add text)</i>	Visual Dimension bvba	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Ename Abbey became the object of Ename 1290, which is a real time 3D application that shows the village of Ename and its abbey in 1290. Ename 1290, that is located in the Provincial Archaeological Museum of Ename, was awarded for the prestigious Heritage in Motion 2016 Award in the category "Games and Interactive Experiences". It was evaluated as "an interesting and user-friendly interpretation of an archaeological site, encouraging individual exploration and linking space and objects in a very engaging way". The nomination for this award stimulated to continue producing effective and exciting ways to experience cultural heritage and the past through Ename 1665. The period that has been chosen for Ename 1290 is linked to Martijn van Torhout, a medieval monk working in the abbey of Ename who was one of the first to write in ancient Dutch, the language of the common people. His figure allowed to emphasise the role of the scriptorium in medieval abbeys. Ename 1290 has been implemented on the TimeGate system that consists of games PC, a Kinect2 camera and a short-throw projector. It allows to navigate through and interact with the reconstructed virtual world through arm gestures, with the user standing at a about 5 m distance of the projection screen in front of the Kinect2 camera. The software has been created on the Unity3D platform with the interface to the Kinect2 camera as an internal script. The gestures are recorded and fine-tuned in a gesture editor. The gestures include walking forward, looking around (left, right, up, down), selecting an object and manipulating it (rotating it in all directions, putting it back or taking it). The navigation through the virtual world is limited to a path (which is indicated as a white line in the 3D scene) to improve the efficiency of the exploration of the vast reconstructed area. The virtual reconstruction of Ename 1290 application has two main uses: on one hand, it provides a virtual walk through the reconstructed abbey under the direction of a museum guide, on the other hand it can act as an educational game, where every object will reveal a small part of the game story through a short narrative when selected. Both uses are integrated into one system with minimal effort (turning the object stories on or off). In both cases, it is a social activity in which the group is involved and discussion and interaction is stimulated, although only one person at the time interacts with the 3D. Moreover, the virtual reconstruction has a rich 3D soundscape as many objects and animals have associated sounds, creating a strong feeling of presence.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> Bentkowska-Kafel A., Denard H., Baker D., <i>Paradata and Transparency in Virtual Heritage</i>, Routledge, London and New York 2012. https://enameabbey.wordpress.com/2016/06/02/heritage-in-motion-2016-award/ 	

	<ul style="list-style-type: none"> • https://enameabbey.wordpress.com/1290-game/ • https://heritageinmotion.eu/himentry/ename-1290 • https://worldwidemuseum.wordpress.com/2016/10/10/ename-1290-backstage-reconstructing-saint-salvator-abbey/ • https://www.4ch-project.eu/using-3d-reconstruction-and-story-telling-to-bring-the-past-to-life/
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i>, 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf.</p> <p>Council of Europe, <i>Convention for the Protection of the Archaeological Heritage of Europe</i>, The Valletta Convention, 1992, https://www.coe.int/en/web/culture-and-heritage/valletta-convention.</p> <p>ICOMOS, <i>Salalah Guidelines for the Management of Public Archaeological Sites</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a363f8c4662b.pdf.</p>
Keywords <i>transversal tags among different fields of research (add text)</i>	<p>Archaeological sites</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  <p>https://enameabbey.wordpress.com/1290-game/</p> </div> <div>  <p>https://www.4ch-project.eu/using-3d-reconstruction-and-story-telling-to-bring-the-past-to-life/</p> </div>



4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location reference to Geonames to capture the location (add text)	Place name	Ename
		Address	
		Country	Belgium
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Benedictine abbey
	Time period (select from list)	Century 11st-18th century
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year 1063
		End year 1795
		Ancient period
		Post industrial revolution period
		Event Construction
		Actor Count of Flanders
		Century 11st century
		Start year 1063
		End year 1063
		Event Abolished in the French Revolution
		Actor
		Century 18th century
		Start year 1795
		End year 1795
OTHER	Investigation status (select from list)	Un-documented
		Archived
		Studied
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology
		Artisanry
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means Writings of a medieval monk, Martijn van Torhout, working in the abbey who was one of the first to write in ancient Dutch
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.) Use as a benedectine abbey

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
		Immovable	Written evidences
			Carved
			Frescoes
			Graffiti
			Mosaics
			Digital Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	

	Temporal <i>significant events in the history of the heritage artefact (add text)</i>	Event	Use of objects and writing of texts
		Actor	Monks of the abbey
		Century	13th century
		Start year	1290
		End year	1290
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_002

Type of best practice <i>(select from list)</i>	Conservation
	Preservation
	Valorisation

Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Ename Abbey
	Village of Ename

Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials
	Ceramic materials
	Concrete
	Concrete derivatives
	Glass materials
	Metal materials
	Paints, varnishes and enamels
	Plasters
	Polymeric materials
	Marbles, travertines, stones and granites
	Vegetable, mineral and animal fibres
	Wood
	Wood derivatives

Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	—
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Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	TimeGate system (games PC, Kinect2 camera and short-throw projector) Unity3D platform Gesture editor
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Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists Companies from the creative industry producing heritage-based content, apps, games, education and tourism services
--	--

Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Documentation of CH; Reconstruction; Gamings with CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	

	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_002

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH	Skills on digitalisation				
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials					
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction	Skills on digitalisation				
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH	Skills on digitalisation				

1. CASE STUDY (INTRODUCTION)		BP_003
Best practice ref. <i>identification code (add text)</i>	BP_003	
Object <i>object of the case study (add text)</i>	HORTA MUSEUM, BRUSSELS, BELGIUM	
Intervention <i>subject of the case study (add text)</i>	Safeguarding of a post industrial revolution architecture	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	20th-21st century
	Start date	1989
	End date	2014
Actors <i>main actors involved (add text)</i>	Barbara Van der Wee (architect), Françoise Aubry (museum's curator)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Horta Museum is housed in the private house and studio of architect Victor Horta composed of two buildings. The Horta Museum was established in 1969 by the Municipality of Saint-Gilles, with the aim of preserving Victor Horta's home and studio and of opening them to the general public. During a process that lasted 25 years, the architecture and interior decoration, which are masterpieces of European Art Nouveau, were gradually preserved thanks to the collaborative work of many craftsmen. The house has retained much of its interior decoration: mosaics, stained glass, furniture and wall paintings make up a harmonious whole that is refined to the smallest detail. The museum is also a research centre on Victor Horta and Art Nouveau. The architect's personal archives, a collection of his building projects and the library are accessible to the public. The Museum is regularly visited by students and researchers from all over the world. Moreover, thanks to the support of the Brussels-Capital Region, the Museum has held creative workshops for children. During these events, they can experience the arts and crafts used by Horta in his designs, such as mosaic-work, stained glass and decorative wallpaper, and are also shown how to use their observations of the natural world to create ornamental designs. The outstanding conservation of the Horta Museum, led by architect Barbara Van der Wee, in collaboration with Françoise Aubry, the museum's curator, received the European Union Prize for Cultural Heritage - Europa Nostra Award in 2014.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • https://it.qiq.wiki/wiki/Maison_%26_Atelier_Horta • https://visit.brussels/it/place/Museo-Horta • http://www.fedoa.unina.it/3299/1/Palomba_Daniela.pdf • https://www.europanostra.org/belgium-horta-museum-becomes-member-europa-nostra/ • https://www.europeanheritageawards.eu/winners/horta-museum/ • http://www.hortamuseum.be/en/Welcome • https://whc.unesco.org/en/list/1005/ 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	
Keywords <i>transversal tags among different fields of research (add text)</i>	Post industrial revolution architecture	
	Conservation	
	Preservation	
	Valorisation	

Image/s of the best practice

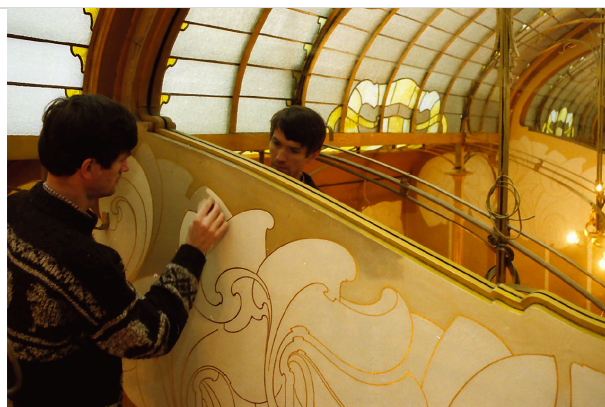
nr. 1/3 image/s to identify the type of best practice



<https://www.european-ostra.org/belgium-horta-museum-becomes-member-europa-nostra/>



http://www.hortamuseum.be/uploads/pdf/2022-02_Salle_Restauraton_Press_EN.pdf



http://www.hortamuseum.be/uploads/pdf/2022-02_Salle_Restauraton_Press_EN.pdf

A black and white photograph of the Hotel de Ville in Paris. The image shows a section of the building's facade, characterized by its ornate, classical architectural style. The facade is light-colored, possibly stone or plaster, and features several windows of varying sizes and shapes. On the left, there are tall, narrow windows with arched tops. In the center, there is a large, arched window with a decorative balcony or loggia in front of it, supported by ornate brackets. To the right, there are more windows, including a large, multi-paned window at the top. The overall appearance is one of grandeur and historical significance.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Brussels
		Address	Rue Américaine 27
		Country	Belgium
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Victor Horta maison and atelier
		Century	20th century
		Start year	1901
		End year	1919
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation
		Actor	Victor Horta
		Century	19th-20th century
		Start year	1898
		End year	1901
		Event	Modifications
		Actor	Victor Horta
		Century	20th century
		Start year	1906
		End year	1911
		Event	Establishment of the Horta Museum
		Actor	Municipality of Saint-Gilles
		Century	20th-21st century
		Start year	1969
		End year	—
		Event	Restoration and re-establishment of the monastic community
		Actor	Abate Maurus Knappek
		Century	20th century
		Start year	1947
		End year	1968
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	Victor Horta
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Art Nouveau masterpiece

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type (of the artefact asset) <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
		Mosaics	
	Digital	Art	
		Virtual reality	
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
Temporal significant events in the history of the heritage artefact <i>(add text)</i>	Event		
	Actor		
	Century		
	Start year		
	End year		
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_003

Type of best practice <i>(select from list)</i>	Conservation Preservation Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Two buildings composing Horta Museum		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials Ceramic materials Concrete Concrete derivatives Glass materials Metal materials Paints, varnishes and enamels Plasters Polymeric materials Marbles, travertines, stones and granites Vegetable, mineral and animal fibres Wood Wood derivatives	Stained glass Metal Wall paintings Plasters Decorative wallpapers	
Type of risk <i>the reason for the intervention, if relevant - link to T1.2 (add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3 (add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4 (add text)</i>	General and educational users and visitors, tourists Professional researchers		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES TRANSFERABILITY	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i> <i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i> <i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials




	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

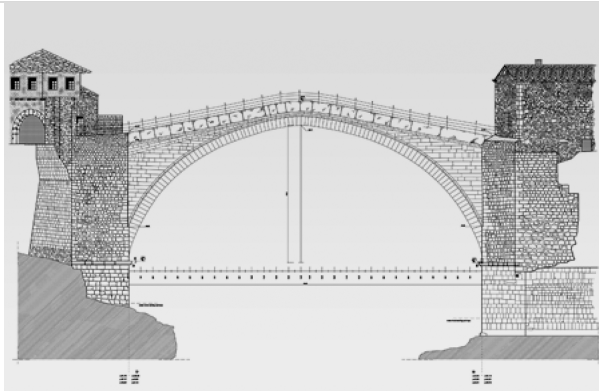
BP_003

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
	•	•	Adaptive re-use of CH					
	•	•	Accessibility					
		•	Dissemination through publications					
		•	Organisation of events and festivals					
		•	Encounters with communities					
		•	Educational activities and programmes					Skills on training and educational activities
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

	<p>Vv.Aa., <i>Lima Declaration for Disaster Risk Management of Cultural Heritage</i>, 2010, https://www.icomositalia.com/_files/ugd/57365b_452c480e9ba54686ba2f6c22b0d52b9e.pdf.</p> <p>UNESCO, <i>Warsaw Recommendation on Recovery and Reconstruction of Cultural Heritage</i>, 2018, https://whc.unesco.org/en/news/1826.</p>
<p>Keywords transversal tags among different fields of research (add text)</p>	<p>Assets with signs of conflicts/natural hazards</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
<p>Image/s of the best practice nr. 1/3 image/s to identify the type of best practice</p>	<div>  <p>https://www.bbc.co.uk/programmes/p02cnyh7</p> </div> <div>  <p>https://www.iguzzini.com/it/progetti/light-is-back/il-ponte-di-mostar/</p> </div> <div>  <p>https://www.iguzzini.com/it/progetti/light-is-back/il-ponte-di-mostar/</p> </div>

2. IDENTIFICATION OF THE HERITAGE ASSET

BP_004

Name <i>name by which the heritage asset is known</i> <i>(add text)</i>	Mostar Bridge	
Alternative names (if any) <i>names by which the asset has been known in the past</i> <i>(add text)</i>	Mostar Old Bridge	
Designation and Protection (if any) <i>(select from list)</i>	No protection Local listing (a monument, building, urban area or landscape which is listed on a local register for protection) National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection) International protection (i.e. UNESCO World Heritage)	
Source (if any) <i>the body or information system on which the heritage asset is registered</i> <i>(add text)</i>	UNESCO World Heritage List	
Reference number (if any) <i>identification of this heritage asset within the information system</i> <i>(add text)</i>	946	
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> <i>(add image/s and source/s)</i>		I. Čolak, op. cit., p. 157.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Mostar
		Address	Stari Most
		Country	Bosnia and Herzegovina
		Continent	Europe (outside the European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
Routes	(trading, pilgrimage, etc.)		
Settlement	(towns, town centres, villages, etc.)		
Symbolic and Memorial	(monuments, plates, etc.)		
Vernacular			
Watermanagement systems	(canals, dams, irrigation, etc.)		

CHARACTERISATION OF THE HERITAGE ASSET <i>(the main characteristics of the heritage asset)</i>	Function <i>significant uses of the heritage asset</i> <i>(add text)</i>	Function	Bridge
		Century	16th-20th century
		Start year	1566
		End year	1993
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> <i>(add text)</i>	Event	Construction
		Actor	Mimar Hajruddin
		Century	16th century
		Start year	1557
		End year	1566
		Event	Destroyed by grenades during the war in Bosnia and Herzegovina
		Actor	
		Century	20th century
		Start year	1993
		End year	1993
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i> <i>(add text)</i>	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Symbol of Mostar and Balkan reconciliation

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type (of the artefact asset) <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
		Mosaics	
	Digital	Art	
		Virtual reality	
	Time period <i>(select from list)</i>	Ancient period	
	Post industrial revolution period		
Temporal <i>significant events in</i>	Event		
	Actor		

	<i>the history of the heritage artefact (add text)</i>	Century	
		Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_004

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Bridge and towers		
	Public infrastructure in the old city		
	Neighborhood improvements		
	Monuments/community buildings for ethnic groups		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		Tenelija and Bretcha stone
	Vegetable, mineral and animal fibres		
	Wood		
Wood derivatives			
Type of risk <i>the reason for the intervention, if relevant - link to T1.2 (add text)</i>	Anthropic risks (heritage crimes)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3 (add text)</i>	Lighting design		
Users need <i>response by the best practice, if relevant - link to T1.4 (add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	Management and administration practices; Promotion and support of interventions for conservation
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)	Reconstruction; Creation of partnership and networking

	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Promotion and support of interventions for conservation; Reconstruction; Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_004

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials					
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices		Skills on sustainable management of Cultural Heritage			
			• Promotion and support of interventions for conservation		Skills on application of new technologies		Skills on encouraging and supporting the development of networks	
			• Project of restoration					
			• Reconstruction			Skills on organisation and logistics of complex situations (management of means and resources)	Skills on organisation and logistics of complex situations (management of means and resources)	
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking			Skills on encouraging and supporting the development of networks	Skills on encouraging and supporting the development of networks	
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_005
Best practice ref. <i>identification code (add text)</i>	BP_005	
Object <i>object of the case study (add text)</i>	CHOIROKOITIA ARCHAEOLOGICAL SITE, CHOIROKOITIA, CYPRUS	
Intervention <i>subject of the case study (add text)</i>	3D documentation of an archaeological site	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2018
	End date	On-going
Actors <i>main actors involved (add text)</i>	The Cyprus Institute - research, technology, innovation	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Cyprus Institute (Cyl) has launched in 2018 an ambitious programme for the 3D documentation of the Choirokoitia archaeological site and the creation of a virtual environment, in close collaboration with the French archaeological mission at the site. Following an extensive campaign of 3D documentation of the exposed architectural features of the site and one of the reconstructed house, using aerial and terrestrial photogrammetry and terrestrial laser scanning, a virtual environment was created. The user is able to visit the site in two distinct moments of the its life. It allows visitors to walk around the site, enter reconstructed houses, explore ancient building techniques and investigate some of the ancient tools the inhabitants of the site used in their daily lives. The 3D model, along with the reconstructed habitations (building materials and techniques of construction) and the extensive archaeological data which includes information on the palaeo-environment of the site, animal and plant resources exploited by the inhabitants, are extremely useful for the conservation and preservation of the archaeological site, within its natural environment. Consequently, such information is essential in planning the correct “musealisation” of the site, considering the paths visitors should take in order to fully explore its extent, while at the same time, keeping to a minimum the risks related to such visits. Not only do the models provide a detailed visual record, they can also be used to make comparisons over time and hence used as a tool for monitoring the state of the complete site, enabling interventions to be made quickly when needed.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> https://www.4ch-project.eu/case-study-2-preservation-and-conservation-of-choirokoitia-a-neolithic-settlement/ https://www.cyi.ac.cy/index.php/in-focus/management-plan-for-choirokoitia-presented-at-colloquium-hosted-by-cyi.html https://whc.unesco.org/en/list/848/ 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	
	ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i> , 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf .	
	Council of Europe, <i>Convention for the Protection of the Archaeological Heritage of Europe</i> , The Valletta Convention, 1992, https://www.coe.int/en/web/culture-and-heritage/valletta-convention .	
	ICOMOS, <i>Salalah Guidelines for the Management of Public Archaeological Sites</i> , 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a36	

Keywords
*transversal tags among different fields
of research*
(add text)

Conservation

Preservation

Valorisation

Image/s of the best practice

nr. 1/3 image/s to identify the type of best practice



<https://www.4ch-project.eu/case-study-2-preservation-and-conservation-of-choirokoitia-a-neolithic-settlement/>



<https://whc.unesco.org/en/list/848/>



<https://www.4ch-project.eu/case-study-2-preservation-and-conservation-of-choirokoitia-a-neolithic-settlement/>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Choirokoitia
		Address	
		Country	Cyprus
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
	Symbolic and Memorial	(monuments, plates, etc.)	
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Century Start year End year	Settlement Neolithic age	
	Time period (select from list)	Ancient period		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Post industrial revolution period		
		Event Actor Century Start year End year	Occupied during the Late Aceramic Neolithic of Cyprus 7-6 million years BC	
		Event Actor Century Start year End year	Reoccupied during the Ceramic Neolithic 5 million years BC	
		Event Actor Century Start year End year	Discovered 20th century 1936 1936	
	OTHER	Investigation status (select from list)	Un-documented Archived Studied	
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	Archaeological site
Artisanship				
Authorship				
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)				

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality

OTHER	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal significant events in the history of the heritage artefact <i>(add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_005

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Choirokoitia Archaeological Site		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2 (add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3 (add text)</i>	3D model		
Users need <i>response by the best practice, if relevant - link to T1.4 (add text)</i>	General and educational users and visitors, tourists Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Documentation of CH; Communication of CH; Management and administration practices
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	

	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	


Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_005

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH	Skills on digitalisation			
			• Communication of CH	Skills on digitalisation			
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials				
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices	Skills on digitalisation			
			• Promotion and support of interventions for conservation				
			• Project of restoration				
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				Skills on encouraging and supporting the development of networks
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_006
Best practice ref. <i>identification code (add text)</i>	BP_006	
Object <i>object of the case study (add text)</i>	PAFOS GATE, NICOSIA, CYPRUS	
Intervention <i>subject of the case study (add text)</i>	Management of an open public space	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2019
	End date	On-going
Actors <i>main actors involved (add text)</i>	The Cyprus Institute - research, technology, innovation	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The research about Pafos Gate, located in the moat of the medieval walls of Nicosia, carried out by The Cyprus Institute (Cyl)'s Virtual Environments Lab has been selected among the best international practices of public space co-creation. As a matter of fact, this research on the use of interactive spatial data visualisation for stakeholder engagement in public space co-creation and co-management of historic sites, developed by Cyl and led by Assistant Professor G. Artopoulos, was selected as one of the two best projects in the Open Call of Public Play Space (PPS) Initiatives. PPS is a project co-funded by the Creative Europe programme of the European Union whose main goal is to foster the co-production of inclusive, cohesive and sustainable public space. The project aims to establish a transdisciplinary platform to explore how play and gamification tools in combination with advanced digital technologies can be used to foster the process of public space co-design and place-making, enhancing the understanding of the relationship between the space and its users. The State of the Art Catalogue collects and analyses 30 best-practice case studies, offering an international panorama of the emerging methodologies and strategies for the public space co-design through digital technologies. The best practices featured in the Catalogue were first selected from the results of an International Open Call launched in December 2019, and later evaluated for the announcement of the two winning methodologies. Especially, the research about Pafos Gate proposes a methodology for the cross-disciplinary study and analysis of complex urban realities, such as historic Mediterranean cities, with the use of advanced digital tools for the creation and development of real-time virtual environments for research and collaboration that capture data of users' behaviour in space. The objective of this research is a digital platform, which through immersion, urban data modeling and interactive visualisation enables the evaluation of alternative planning scenarios and design interventions in the context of the management plan of open public spaces that used to be popular within the urban fabric of European cities, but are now forgotten or in limbo due to political, economic, or social pressures. This research on the reintegration of the archaeological site of the Pafos Gate in the network of public spaces of the contemporary city was developed in the context of the COST Action TU1306, with the support of the Department of Antiquities, Nicosia Municipality, and in collaboration with NCSA at the University of Illinois at Urbana-Champaign.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> https://www.cyi.ac.cy/index.php/in-focus/cyi's-virtual-environments-lab-research-selected-among-the-best-international-practices-of-public-space-co-creation.html https://www.cyprusisland.net/attractions/paphos-gate 	

	<ul style="list-style-type: none"> https://whc.unesco.org/en/list/79/
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>Gubbio Charter</i>, 1960, https://www.italianostra.org/la-carta-di-gubbio-del-1960/.</p> <p>Vv.Aa., <i>Noto Charter</i>, 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf.</p> <p>ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i>, Washington Charter, 1987, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_012ee3b47bea4183b8a7d344d1bcd340.pdf.</p> <p>ICOMOS, <i>The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas</i>, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_b4260164b6a74386a9bc53253775bb98.pdf.</p> <p>UNESCO, <i>Recommendation on the Historic Urban Landscape</i>, 2011, https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf.</p> <p>Vv.Aa., <i>Urban Agenda for the EU</i>, Pact of Amsterdam, 2016, https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf.</p> <p>UNESCO, <i>The UNESCO Recommendation on the Historic Urban Landscape</i>, 2019, https://whc.unesco.org/en/hul/.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>Urban spaces/assets</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	 <p>https://www.cyi.ac.cy/index.php/in-focus/cyi's-virtual-environments-lab-research-selected-among-the-best-international-practices-of-public-space-co-creation.html</p>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Nicosia
		Address	Paphos
		Country	Cyprus
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Entrance to the Venetian walls built around Nicosia
	Time period (select from list)	Century Middle ages - 21st century
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year 1144
		End year 1940
		Ancient period
		Post industrial revolution period
		Event Construction
		Actor
		Century Middle ages
		Start year
		End year
OTHER	Investigation status (select from list)	Un-documented
		Archived
		Studied
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology Entrance to defensive walls
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

		Preserved
		Recorded
OTHER	Immaterial aspects connection to immaterial aspects (select from list)	Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_006

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Pafos Gate		
	Venetian walls		
	Surrounding open public space		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick	
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Digital platform		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Public and private heritage institutions responsible for managing monuments and sites		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Monitoring; Management and administration practices; Encounters with communities
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and</i>	

		<i>storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_006

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			Historic and bibliographic research				
			Studies on CH				
			Documentation of CH				
			Communication of CH				
			Preventive conservation				
			Diagnostic activities				
			Identification of the risks and deterioration patterns				
			Materials conservation tests				
			Pre-consolidation, cleaning, consolidation and protection of CH materials				
			Reinforcement of CH buildings				
			Monitoring	Skills on digitalisation			
			Maintenance practices				
			Management and administration practices	Skills on digitalisation			
			Promotion and support of interventions for conservation				
			Project of restoration				
			Reconstruction				
			Adaptive re-use of CH				
			Accessibility				
			Dissemination through publications				
			Organisation of events and festivals				
			Encounters with communities	Skills on mapping and analysis of users' needs and requirements			Skills on mapping and analysis of users' needs and requirements
			Educational activities and programmes				
			Creation of partnership and networking			Skills on encouraging and supporting the development of networks	
			Advertisements with CH				
			Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_007
Best practice ref. <i>identification code (add text)</i>	BP_007	
Object <i>object of the case study (add text)</i>	TROODOS CHURCHES, TROODOS, CYPRUS	
Intervention <i>subject of the case study (add text)</i>	Analysis, documentation and visualisation of ancient churches	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2018
	End date	On-going
Actors <i>main actors involved (add text)</i>	The Cyprus Institute, Department of Antiquities Cyprus, Staffordshire University, Research and Innovation Foundation (Cyprus)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>In an era of rapid technological improvements, state-of-the-art methodologies and tools dedicated to the protection and promotion of cultural heritage should be developed and extensively employed to expand and enrich historical and archaeological research and possibly revise or add new information to established theories. The IH-AT (Invisible Heritage Analysis and Technology) project aims to design and develop an innovative portal comprised of reliable and efficient technology-ready tools for the visualisation, documentation and analysis of the UNESCO listed churches in the Troodos area. The project aims at applying Non-Destructive-Techniques (NDT), geophysics, 3D modelling and visualisation methods, supported by art-historical and archaeological research, to investigate a cluster of selected churches in Cyprus. The main aims are to preserve by way of record the existing structural remains and to identify lost and invisible features, as well as assess the conservation conditions of their structures. The portal will be exploited by a variety of stakeholders and is targeted to multiple economical actors such as public authorities, universities and individuals. This pilot application enables the generation of an online platform and database from which information and data can be extracted. This can be used to inform further research and conservation projects at the specific UNESCO churches. In addition, the platform acts as a methodological example of best practice with a view to expanding these to other heritage sites. Through the integration of expertise from different disciplines, the project forges essential links and synergies for the delivery of innovative tools to tackle challenges related to the conservation, restoration and knowledge of heritage sites. This is in the framework of the Project EXCELLENCE/0918/0144, which is co-financed by the European Regional Development Fund and the Republic of Cyprus through the Research and Innovation Foundation.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • http://ihat.cyi.ac.cy • https://www.cyi.ac.cy/index.php/cyi-news/cyi's-'cyprus-dendrochronology-lab'-cdl-studies-famous-byzantine-and-medieval-troodos-churches-included-in-unesco-world-heritage-sites-list.html • https://whc.unesco.org/en/list/351/ • https://it.wikipedia.org/wiki/Chiese_dipinte_nella_regione_dei_monti_Troodos 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	

Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	Ancient constructions
	Conservation
	Preservation
	Valorisation

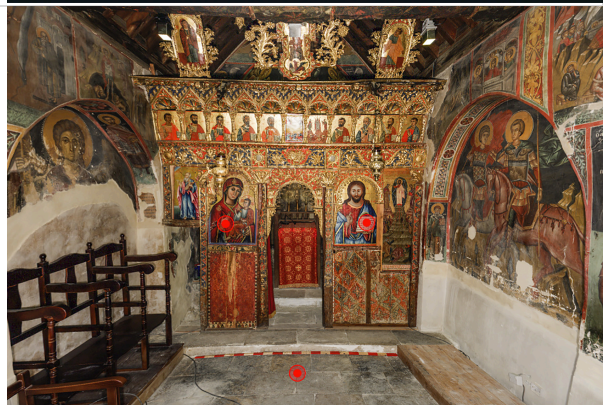
Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice



<http://ihat.cyi.ac.cy>



<https://modelier.us.aldryn.io/models/17986591-5b41-4acb-9d18-ebca1f2f893a/v2/embed/>



<https://apac.cyi.ac.cy/sites/object/object/360/transfiguration-saviour/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Troodos
		Address	Troodos Mountains
		Country	Cyprus
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Century Start year End year	Churches 11th-21st century	
	Time period (select from list)	Ancient period		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Post industrial revolution period		
		Event	Construction	
		Actor		
		Century	11th-16th century	
		Start year End year		
	OTHER	Investigation status (select from list)	Un-documented Archived Studied	
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
			Artisanship	
Authorship				
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)		Sacred value		

Cultural Heritage Type				
ARTEFACTS (particular consideration for, if relevant)				
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features	
			Art works	
			Eco-facts	
			Ethnographic	
			Historic replica	
		Immovable	Utilitarian	
			Written evidences	
			Carved	
			Frescoes	
			Graffiti	
	Digital	Mosaics		
		Art		
		Virtual reality		
		Time period (select from list)	Ancient period Post industrial revolution period	
		Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
Actor				
Century				
Start year				
End year				
OTHER	Investigation status (select from list)	Un-documented Archived Studied Exhibited		

		Preserved
		Recorded
OTHER	Immaterial aspects connection to immaterial aspects (select from list)	Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_007

Type of best practice (select from list)	Conservation
	Preservation
	Valorisation

Main component or aspect main component or aspect of the heritage asset on which the best practice focuses (add text)	10 churches
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Materials materials on which the best practice focuses, if applicable (select from list) (add text)	Bituminous materials	
	Ceramic materials	
	Concrete	
	Concrete derivatives	
	Glass materials	
	Metal materials	
	Paints, varnishes and enamels	Painted surfaces
	Plasters	Plaster
	Polymeric materials	
	Marbles, travertines, stones and granites	Stone
	Vegetable, mineral and animal fibres	
	Wood	Wood
	Wood derivatives	

Type of risk the reason for the intervention, if relevant - link to T1.2 (add text)	Anthropic risks (heritage management)
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Technologies Technologies for the diagnosis, if relevant - link to T1.3 (add text)	3D modelling
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Users need response by the best practice, if relevant - link to T1.4 (add text)	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Professional researchers General and educational users and visitors, tourists
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Relevance of the best practice main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice (select from list) (add text)	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	Historic and bibliographic research; Studies on CH; Documentation of CH; Communication of CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/upskilling for traditional and new profession, guidelines for data	

		<i>acquisition, management and storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Communication of CH

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_007

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research	Skills on digitalisation				
•	•	•	Studies on CH	Skills on digitalisation				
•	•	•	Documentation of CH	Skills on digitalisation				
•	•	•	Communication of CH	Skills on digitalisation				Skills on mapping and analysis of users' needs and requirements
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
•	•	•	Dissemination through publications					
•	•	•	Organisation of events and festivals					
•	•	•	Encounters with communities					
•	•	•	Educational activities and programmes					
•	•	•	Creation of partnership and networking				Skills on encouraging and supporting the development of networks	
•	•		Advertisements with CH					
•	•		Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_008
Best practice ref. <i>identification code (add text)</i>	BP_008	
Object <i>object of the case study (add text)</i>	VILLA TUGENDHAT, BRNO, CZECH REPUBLIC	
Intervention <i>subject of the case study (add text)</i>	Deep analysis and restoration of a 20th century architecture	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2010
	End date	2012
Actors <i>main actors involved (add text)</i>	Omnia projekt, Archteam, Raw	
Description of the best practice <i>Brief abstract (add text)</i>	<p>A deep analysis is at the basis of the restoration intervention carried out at Villa Tugendhat, now house-museum, between 2010 and 2012. As early as 2003, the Conservation Investigation Campaign began the analyses for the project aimed at transmitting the building to the future, making it the object of a thorough knowledge process based on archival documents, design drawings, photographs, bibliographic sources, contacts with the heirs and the direct reading of the building. In addition, the project is the result of the reflections conducted by the Tugendhat House International Committee, as well as of an in-depth collaboration between institutions, scholars, professionals and workers. Conservation work was carried out for the Tivoli travertine and Morocco onyx slabs, while the Makassar ebony partition wall, lost during the Second World War, was found in a nearby building and rehoused in its original location, supported by a new wooden structure and anchored to the floor with metal inserts. The original Rako-Czechoslovakia ceramic tiles were preserved in small areas of the building. The hot rolled steel window profiles were mechanically cleaned of incoherent deposits and subject to a careful work to contain deformation. Anti-corrosion treatments, the painting of the window profiles and the replacing of glasses completed the work. A similar approach to that used for the conservation of the windows steel structures was generally followed for the metal elements of the villa, albeit oxidised and corroded. In addition, on the plant systems side, careful integrations have made it possible, on the one hand, to bear witness to the original functioning of the building through the musealization of the plant system machines that are still located in the level dedicated to the "technical monuments" and, on the other hand, to reuse the pre-existing traces and terminals which made it possible to minimise the compromise of the consistency of vertical and horizontal partitions. An insulating layer was applied to the flat roof of the building, allowing to improve the internal comfort. Microclimatic monitoring campaign are carried out in the building.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> Bonora A., Fabbri K., Favaretto G., Pretelli M., <i>Le diverse consistenze dell'acqua. Dotazioni impiantistiche e controllo del microclima a Villa Tugendhat a Brno</i>, in Biscontin G., Driussi G. (eds.), <i>Gli effetti dell'acqua sui beni culturali. Valutazioni critiche e modalità di verifica</i>, Arcadia Ricerche, Marghera-Venezia, 2020, pp. 513-524. Černá I., Černoušková D. (eds.), <i>Mies in Brno. The Tugendhat House</i>, Brno City Museum, Brno, 2013. Hammer I., <i>The project of conservation/restoration research at Tugendhat House. Materials and surfaces of the rendered façades, interior walls and</i> 	

	<p><i>painted wood</i>, in I. Černá, I. Hammer (eds.), <i>Materiality</i>. Proceedings of the International Symposium on the Preservation of Modern Movement Architecture (Brno, 27-29 April 2006), Muzeum mesta Brna & Hornemann Institut, Brno, 2008, pp. 164-174.</p> <ul style="list-style-type: none"> • Pelčák P., Wahla I., <i>Mies van der Rohe. Villa Tugendhat in Brno</i>, Brno City Museum, Brno, 2016. • Tropeano R., <i>Ludwig Mies van der Rohe. Casa Tugendhat, Brno, Repubblica Ceca</i>, in "Domus", 994, 2015, pp. 86-103. • https://www.tugendhat.eu/en/ • https://whc.unesco.org/en/list/1052/
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>I dieci punti del comitato dei monumenti moderni</i>, in F. Perego, <i>Monumenti moderni, un'emergenza nuova</i>, in "Edilizia Popolare", 216-217, 1991, p. 48.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of 20th Century Architectural Heritage</i>, Madrid Document, 2011, http://orcp.hustoj.com/wp-content/uploads/2016/04/madriddocumentenglish.pdf.</p> <p>The Getty Conservation Institute, <i>A Colloquium to Advance the Practice of Conserving Modern Heritage</i>, 2013, https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/colloquium_report.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of Twentieth-Century Architectural Heritage</i>, Madrid Document, 2014, http://www.icomos-isc20c.org/pdf/madrid_doc_10.26.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches to the Conservation of Twentieth-Century Cultural Heritage</i>, Madrid-New Delhi Document, 2017, http://www.icomos-isc20c.org/pdf/madrid-new-delhi-document-2017.pdf.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>20th century architectural heritage</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>

Image/s of the best practice
 nr. 1/3 image/s to identify the type of
 best practice



Photo: Giulia
 Favaretto, 2017.



Photo: Giulia
 Favaretto, 2017.



Photo: Giulia
 Favaretto, 2017.

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Altenburg
		Address	Abt-Placidus-Much-Straße 1
		Country	Austria
		Continent	Europe
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Villa
		Century	20th century
		Start year	1930
		End year	1938
		Function	Private dance school
		Century	20th century
		Start year	1945
		End year	1950
		Function	Brno Hospital children's rehabilitation centre
		Century	20th century
		Start year	1950s
		End year	1950s
	Time period (select from list)	Function	Place for events of the city administration
		Century	20th century
		Start year	1985
		End year	1994
		Function	Decentralised structure of the Brno City Museum
		Century	20th-21st century
		Start year	1994
		End year	On-going
		Event	Realisation
		Actor	Ludwig Mies van der Rohe
		Century	20th century
		Start year	1928
		End year	1930
OTHER	Investigation status (select from list)	Event	Restoration intervention
		Actor	SÚRPMO
		Century	20th century
		Start year	1981
		End year	1985
		Event	Property of the Brno City Museum
		Actor	
		Century	20th-21st century
		Start year	1994
		End year	On-going
		Event	Brno
		Actor	Černopolní 45
		Century	Czech Republic
		Start year	Europe
		End year	Brno
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	Ludwig Mies van der Rohe
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	

OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Modern Movement masterpiece

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
	Temporal significant events in the history of the heritage artefact (add text)	Post industrial revolution period	
		Event	Realisation
		Actor	Ludwig Mies van der Rohe
		Century	20th century
		Start year	1928
		End year	1930
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list)	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_008

Type of best practice <i>(select from list)</i>	Conservation	
	Preservation	
	Valorisation	
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Villa	
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	Rako-Czechoslovakia ceramic tiles
	Concrete	
	Concrete derivatives	
	Glass materials	Glass
	Metal materials	Hot rolled steel window profiles, steel
	Paints, varnishes and enamels	
	Plasters	
	Polymeric materials	
	Marbles, travertines, stones and granites	Tivoli travertine, Morocco onyx
	Vegetable, mineral and animal fibres	
	Wood	Makassar ebony, wood
Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—	
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization	

Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Historic and bibliographic research; Studies on CH; Diagnostic activities; Pre-consolidation, cleaning, consolidation and protection of CH materials; Monitoring; Project of restoration
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Project of restoration; Dissemination through publications; Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities



4. SYNTHESIS SHEET

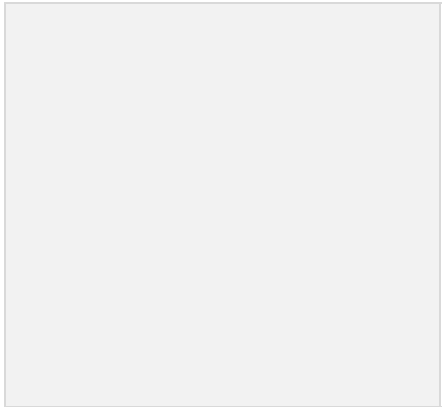
BP_008

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research			Skills on taking care of Cultural Heritage materials		
•	•	•	Studies on CH			Skills on taking care of Cultural Heritage materials		
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•	•	Preventive conservation					
•	•	•	Diagnostic activities			Skills on taking care of Cultural Heritage materials		
•	•	•	Identification of the risks and deterioration patterns					
•	•	•	Materials conservation tests					
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•	•	Reinforcement of CH buildings					
•	•	•	Monitoring			Skills on achievement of environmental challenges and objectives		
•	•	•	Maintenance practices					
•	•	•	Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration			Skills on achievement of environmental challenges and objectives	Skills on encouraging and supporting the development of networks	
•	•	•	Reconstruction					
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
•	•	•	Dissemination through publications				Skills on encouraging and supporting the development of networks	
•	•	•	Organisation of events and festivals					
•	•	•	Encounters with communities					

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Educational activities and programmes				
			• Creation of partnership and networking			Skills on encouraging and supporting the development of networks	
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_009
Best practice ref. <i>identification code (add text)</i>	BP_009	
Object <i>object of the case study (add text)</i>	LUMA, ARLES, FRANCE	
Intervention <i>subject of the case study (add text)</i>	New additions for the re-use of an industrial archaeology site	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2014
	End date	2021
Actors <i>main actors involved (add text)</i>	Frank Gehry	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The city of Arles is known to the art community for two reasons: it is the place where Vincent van Gogh lived for over two years, and where he painted some of his best-known works, and it hosts the annual Rencontres d'Arles festival, the Europe's most important photography event. To consolidate Arles' position as a cultural hub, the collector Maja Hoffman founded the Luma Foundation and opened the Luma Arles Centre for Contemporary Arts in 2013, transforming an abandoned railway yard into a complex with exhibition spaces, artist residencies, workshops and other services related to cultural production. Luma Arles focuses on the relationship between art, culture, environmental issues, human rights, education and research, and it has proved to be a centre of international significance. Among the regenerated pavilions of the cultural centre and in the heart of the Parc des Ateliers, a new architecture stands out: a tower designed by architect Frank Gehry. This building is made up of various multi-purpose spaces, from exhibition halls to work and research rooms, and event venues. The tower is made up of 4 interconnected towers attached to a concrete spine that houses the elevators and stairs. The twisted façade is decorated with stainless steel bricks deformed by a specific mechanical process. This material, which is typical of the architect's work, captures and renders all the color variations in the sky, and gives the building an ever-changing appearance. This aesthetic choice is a nod to the pictorial practice of Vincent van Gogh, who was constantly capturing the shades of the Provençal sky on his canvases during his time in Arles. The architect also wanted to give the building a mineral touch through its shape and internal structure, which are imbued with the rocky landscapes of the Alpilles, especially the Val d'Enfer near Les Baux-de-Provence. He even used elements of the geological vocabulary to characterize certain parts of the building, such as the glazed "faults" that run along the façade and connect the towers together. Glass boxes serve as windows extending beyond the façade to offer different views of the site and its surroundings. At the foot of the building, a glass rotunda, called the Drum and inspired by the Arles Amphitheater, offers a unique reception area for visitors. Like the Roman arena, the scale and geometry of the rotunda reflect the influence of Roman urbanism on the city. Blinds can be spread following the path of the sun to protect the spaces. The energy supply for this building, as well as for the other buildings on the site, will be provided by the centralized cogeneration system using waste vegetable oil installed in Les Forges.</p>	

Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • https://www.luma.org/en/arles.html • https://www.ilgiornaledellarte.com/articoli/nella-torre-di-maja-l-arte-biodiversa-/136655.html • https://www.tribune.com/progettazione/architettura/2021/07/luma-foundation-torre-frank-gehry-van-gogh-arles/ • https://www.domusweb.it/it/architettura/gallery/2021/04/07/uno-scintillante-edificio-di-gehry-luma-arles-ne-aveva-veramente-bisogno.html
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS-TICCIH, <i>The Nizhny Tagil Charter for the Industrial Heritage</i>, 2003, https://www.icomos.org/18thapril/2006/nizhny-tagil-charter-e.pdf.</p> <p>ICOMOS-TICCIH, <i>Joint ICOMOS-TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes</i>, Dublin Principles, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_d251c1dbc22a4210a5d893cf058f8c41.pdf.</p>
Keywords <i>transversal tags among different fields of research (add text)</i>	<p>Industrial archaeology assets</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  </div> <p>https://www.theguardian.com/artanddesign/2021/aug/29/luma-arles-review-frank-gehry-carsten-holler-olafur-eliasson-maja-hoffmann</p> <div>  </div> <p>https://www.domusweb.it/it/architettura/gallery/2021/04/07/uno-scintillante-edificio-di-gehry-luma-arles-ne-aveva-veramente-bisogno.html</p>



<https://www.theguardian.com/artanddesign/2021/aug/29/luma-arles-review-frank-gehry-carsten-holler-olafur-eliasson-maja-hoffmann>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Arles
		Address	Parc des Ateliers, Av. Victor Hugo 35
		Country	France
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Industrial site for the repair and construction of locomotives
		Century	19th century
		Start year	1856
		End year	1984
		Function	Site for photo exhibitions
		Century	20th century
		Start year	1986
		End year	1986
		Function	Site for summer installation of the Rencontres d'Arles and Les Suds festivals
		Century	21st century
		Start year	2000
		End year	2013
	Time period (select from list)	Function	Luma Arles Centre for Contemporary Arts
		Century	21st century
		Start year	2013
		End year	On-going
		Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation
		Actor	PLM (Paris-Lyon-Méditerranée) company
		Century	19th century
		Start year	1844
		End year	1856
		Event	Closure of the Parc des Ateliers
		Actor	
		Century	20th century
		Start year	1984
		End year	1984
		Event	Purchase of the Chaudronnerie de Fer (iron and boiler works) building
		Actor	Provence-Alpes-Côte d'Azur region
		Century	21st century
		Start year	2005
		End year	2005
		Event	Renovation of the Grande Halle (transformation of the space into a cultural venue dedicated to multimedia creation, as well as digital and virtual imaging)
		Actor	Moatti & Rivière Architects
		Century	21st century
		Start year	2005
		End year	2007
		Event	Establishment of the Luma Foundation and lunch of the Luma Arles project
		Actor	Collector Maja Hoffman
		Century	21st century
		Start year	2013

		End year	2013
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	Industrial archaeological site
		Artisanship	
		Authorship	
		Knowledge/ideas	New tower inspired to the rock formations in the region and the lighting effects of the <i>Starry Night</i> (1889) by Vincent Van Gogh
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal significant events in the history of the heritage artefact (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects (select from list)	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	

OTHER	Immaterial aspects connection to immaterial aspects (select from list)	Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_009

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	New tower		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete	Concrete	
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Stainless steel bricks	
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Project of restoration
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals; Encounters with communities; Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_009

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials				
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration		Skills on achievement of environmental challenges and objectives		
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				Skills on encouraging creative industries' involvement in CH domains
			• Encounters with communities				Skills on encouraging creative industries' involvement in CH domains
			• Educational activities and programmes				Skills on encouraging creative industries' involvement in CH domains
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)			BP_010
Best practice ref. identification code (add text)		BP_010	
Object object of the case study (add text)		JARDIN DES VESTIGES, MARSEILLES, FRANCE	
Intervention subject of the case study (add text)		Valorisation and cultural tourism in a green area	
Temporal time period of the intervention, referred to the actions/activities of the case study (add text)	Century	21st century	
	Start date	2009	
	End date	2019	
Actors main actors involved (add text)		Joël-Louis Martin, Municipality of Marseille, Marseille Provence Greeters Association, Fabrica Traceorum	
Description of the best practice Brief abstract (add text)		<p>The Jardin des Vestiges is a garden housing the archaeological remains of the old port of Marseille. The site was brought to light in 1967. During the construction work, carried out in that year, of a shopping centre in the heart of Marseille called "Centre Bourse", these important archaeological remains were in fact brought to light. This discovery led to the classification of them as national historic monument. In 2009, a garden designed by Joël-Louis Martin, a landscape architect, was inaugurated here. The garden is part of the Marseille History Museum. In 2013, on the occasion of the designation of Marseille as capital of culture, the site was renovated, the area was redeveloped and the adjoining Marseille History Museum offered a flashback of 26 centuries in the city. As a matter of fact, for Marseille, the 2013 years as European Capital of Culture was marked by numerous events, festivals and the opening of new spaces dedicated to the arts; within this framework, cultural experiences were accompanied by walks in parks or other wellness activities. Green spaces has therefore been as important as theatres and museums; after all, half of Marseille's territory is "green", with 400 hectares of parks and public gardens. On this occasion, an original idea for getting to know the city and its heritage was to be accompanied by Marseille locals. This was proposed by the Marseille Provence Greeters Association. After that, in 2018, a project was launched to upgrade the spaces and redesign the scenography with a new entrance thanks to the realisation of a large staircase. The garden, requalified by the Marseille architectural agency Fabrica Traceorum of Corrado de Giuli Morghen and Céline Girard, specialising in heritage restoration, was inaugurated in 2019. Guided tours are conducted within it.</p>	
Bibliography and sitography main sources referred to the best practice (add text)		<ul style="list-style-type: none">• https://france3-regions.francetvinfo.fr/provence-alpes-cote-d-azur/bouches-du-rhone/marseille/patrimoine-marseille-site-archeologique-du-port-antique-fait-peau-neuve-1727179.html• https://www.tpbm-presse.com/marseille-le-jardin-des-vestiges-a-bon-port-antique-3146.html• https://www.frequence-sud.fr/loc-1709-jardin_des_vestiges_-_port_antique_marseille• https://madeinmarseille.net/52604-jardin-vestige-musee-histoire/• https://www.ansa.it/web/notizie/canali/inviaggio/news/2013/02/01/Marsigli-a-relax-capitale-cultura_8176698.html• https://tourisme-marseille.com/fiche/jardin-des-vestiges-musee-d-histoire-de-la-ville-de-marseille/• https://it.wikipedia.org/wiki/Jardin_des_Vestiges	

Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice



<https://www.tpbm-presse.com/marseille-le-jardin-des-vestiges-a-bon-port-antique-3146.html>

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Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Marseille
		Address	2 Rue Henri Barbusse
		Country	France
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
	Symbolic and Memorial	(monuments, plates, etc.)	
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function	Port
		Century	Greco-roman period
		Start year	
		End year	
		Function	Site with archaeological remains
		Century	20th century
		Start year	1967
		End year	2009
		Function	Garden
		Century	21st century
		Start year	2009
		End year	On-going
	Time period (select from list)	Ancient period	
	Temporal significant events in the history of the heritage asset (add text)	Post industrial revolution period	
		Event	Discovery of the archaeological remains
		Actor	
		Century	20th century
		Start year	1967
		End year	1967
		Event	Realisation of the garden
		Actor	Joël-Louis Martin
		Century	21st century
		Start year	2009
		End year	2009
		Event	Renovation
		Actor	Municipality of Marseille
		Century	21st century
		Start year	2013
		End year	2013
		Event	Spaces upgrading and scenography redesigning
		Actor	Fabrica Traceorum
		Century	21st century
		Start year	2018
		End year	2019
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	Port of the greco-roman period
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type (of the artefact asset) <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
		Time period <i>(select from list)</i>	Ancient period
		Post industrial revolution period	
Temporal significant events in the history of the heritage artefact <i>(add text)</i>	Event		
	Actor		
	Century		
	Start year		
	End year		
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Management and administration practices; Promotion and support of interventions for conservation; Organisation of events and festivals; Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_010

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research				
•	•	•	Studies on CH				
•	•	•	Documentation of CH				
•	•	•	Communication of CH				
•	•	•	Preventive conservation				
•	•	•	Diagnostic activities				
•	•	•	Identification of the risks and deterioration patterns				
•	•	•	Materials conservation tests				
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials				
•	•	•	Reinforcement of CH buildings				
•	•	•	Monitoring				
•	•	•	Maintenance practices				
•	•	•	Management and administration practices			Skills on encouraging and supporting the development of networks	
•	•	•	Promotion and support of interventions for conservation			Skills on encouraging and supporting the development of networks	
•	•	•	Project of restoration				
•	•	•	Reconstruction				
•	•	•	Adaptive re-use of CH				
•	•	•	Accessibility		Skills on implementing measures to encourage people to practice heritage		
•	•	•	Dissemination through publications				
•	•	•	Organisation of events and festivals			Skills on implementing measures to encourage people to practice heritage	

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
		•	Encounters with communities				Skills on implementing measures to encourage people to practice heritage
		•	Educational activities and programmes				
		•	Creation of partnership and networking			Skills on encouraging and supporting the development of networks	
		•	Advertisements with CH				
		•	Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_011
Best practice ref. <i>identification code (add text)</i>	BP_011	
Object <i>object of the case study (add text)</i>	FESTIVAL OF LIGHTS, LYON, FRANCE	
Intervention <i>subject of the case study (add text)</i>	Lighting valorisation of urban cultural heritage	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2016
	End date	Ongoing
Actors <i>main actors involved (add text)</i>	City of Lyon	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Since 1998, Lyon's Old Town is listed as a UNESCO World Heritage area. To find the balance between the rapidly developing urban area and the protected historic city, Lyon adopted a management plan in 2013. This plan guarantees the place of the historic site in a city in development, while at the same time watching to safeguard the spirit of the place. This mechanism of governance creates conditions for a proper coordination of all heritage stakeholders at local level. Since 2016, the city of Lyon organised its annual Fête des Lumières (Festival of Lights). For a series of nights, artists lit up buildings, streets, squares and parks all over the city with several light installations. Millions of visitors gather in Lyon to enjoy the friendly and joyful spirit of the festival. In Lyon, urban lighting is closely embedded in the whole city scape and is part of the city's heritage. Within this scenario participants in the work-shadowing visit had the opportunity to take part in a workshop organised by LUCI (Lighting Urban Community International) in the framework of the Lyon Light Festival Forum, when the organisers of the Festival of Lights shared their experience and gave a behind-the-scenes look at the event. Through the ROCK project (2017-2020), Lyon entered a new phase in the management of its heritage site: the Observatory of Cultural Heritage monitored and evaluated in quantitative and qualitative ways the changes in the Old Town, and assessed together with the inhabitants and citizens which solutions can be found to strike the fragile balance between preservation and development. With regard to the light management, Lyon renewed its Lighting Plan, with the ambition to open the path for integrating new technical possibilities, using light better for urban and social development, preventing the danger of luminous cacophony, reducing energy demand and nocturnal pollution. The entrances/exits of the city are also part of the lighting scheme. Light is an integral part of public actions and landscape, urban and architectural development projects, and open up the way to professionalising an activity that annually acquires new references to its pedigree.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • Signorelli L., <i>Investire nell'industria culturale creativa: il Lighting Design come strategia di valorizzazione dei beni culturali</i>, in Musso S.F., Pretelli M. (coords.), <i>Restauro: Conoscenza, Progetto, Cantiere, Gestione. Sezione 2: Programmazione e finanziamenti</i>, Quasar, Roma 2020, pp. 359-365. • https://whc.unesco.org/en/list/872/ • https://www.fetedeslumieres.lyon.fr/en • http://www.art-vibes.com/art/festival-lights-lyon/ 	

- <https://rockproject.eu/role-model-cities>
- <https://rockproject.eu/news-details/30>

Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)
	Vv.Aa., <i>Gubbio Charter</i> , 1960, https://www.italianostra.org/la-carta-di-gubbio-del-1960/ .
	Vv.Aa., <i>Noto Charter</i> , 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf .
	ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i> , Washington Charter, 1987, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_012ee3b47bea4183b8a7d344d1bcd340.pdf .
	ICOMOS, <i>The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas</i> , 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_b4260164b6a74386a9bc53253775bb98.pdf .
	UNESCO, <i>Recommendation on the Historic Urban Landscape</i> , 2011, https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf .
	Vv.Aa., <i>Urban Agenda for the EU</i> , Pact of Amsterdam, 2016, https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf .
	UNESCO, <i>The UNESCO Recommendation on the Historic Urban Landscape</i> , 2019, https://whc.unesco.org/en/hul/ .

<p>Keywords</p> <p><i>transversal tags among different fields of research</i></p> <p><i>(add text)</i></p>	<p>Urban spaces/assets</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
<p>Image/s of the best practice</p> <p><i>nr. 1/3 image/s to identify the type of best practice</i></p>	<div> </div> <div> <p>https://www.fetedesumieres.lyon.fr/en/installation/enoha-fait-son-cinema</p> </div>



<https://www.fetedeslumieres.lyon.fr/en/installation/reflets>



<https://www.fetedeslumieres.lyon.fr/en/installation/great-indecision-council>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Lyon
		Address	
		Country	France
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)
		Cities	(if other, add text)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	City
	Time period (select from list)	Century	
		Start year	
		End year	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Ancient period	
		Post industrial revolution period	
		Event	
		Actor	
		Century	
		Start year	
End year			
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	City as a place for social activities and practices
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type				
ARTEFACTS (particular consideration for, if relevant)				
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features	
			Art works	
			Eco-facts	
			Ethnographic	
			Historic replica	
			Utilitarian	
			Written evidences	
		Immovable	Carved	
			Frescoes	
			Graffiti	
			Mosaics	
		Digital	Art	
			Virtual reality	
		Time period (select from list)	Ancient period	
			Post industrial revolution period	
Event				
Actor				
Century				
Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Start year			
	End year			
	Investigation status (select from list)	Un-documented		
		Archived		
OTHER		Studied		

Immaterial aspects
connection to
immaterial aspects
(select from list)

		<i>management and storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Monitoring; Management and administration practices
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals; Encounters with communities

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities




4. SYNTHESIS SHEET

BP_011

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH	Skills on application of new technologi es	Skills on sustainable manageme nt of Cultural Heritage	Skills on application of new technologi es		
•	•	•	Preventive conservation					
•	•	•	Diagnostic activities					
•	•	•	Identification of the risks and deterioration patterns					
•	•	•	Materials conservation tests					
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•	•	Reinforcement of CH buildings					
•	•	•	Monitoring				Skills on encouraging and supporting the development of networks	
•	•	•	Maintenance practices					
•	•	•	Management and administration practices				Skills on encouraging and supporting the development of networks	
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•	•	•	Reconstruction					
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
•	•	•	Dissemination through publications					
•	•	•	Organisation of events and festivals					Skills on implementi ng measures


								to encourage people to practice heritage
			• Encounters with communities					Skills on implementing measures to encourage people to practice heritage
			• Educational activities and programmes					
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_012
Best practice ref. <i>identification code (add text)</i>	BP_012	
Object <i>object of the case study (add text)</i>	PALACE OF THE POPES, AVIGNON, FRANCE	
Intervention <i>subject of the case study (add text)</i>	Augmented reality and interactive visits in an ancient palace	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2017
	End date	Ongoing
Actors <i>main actors involved (add text)</i>	Avignon tourism, Histoverly	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Palace of the Popes in Avignon is a virtuous example of application of cutting-edge technology and augmented reality at the service of history and cultural heritage. Available to all visitors to the palace since 2017, an interactive tablet, the so-called Histopad, offers a modern museography system for an immersive digital visit to go back in time and "see the invisible". Visitors are the actors of their own visit: with the Histopad interactive tablet with which they are equipped, thanks to 3D technologies, augmented reality and a powerful geolocation system, they can see in 360° what the palace was like, as well as learn about its history. The Histopad shows historical reconstructions, entirely elaborated by a scientific committee. In addition, the historical content of the old audio guides has been added for an in-depth approach to the history of the monument. This new intuitive, digital, interactive, educational and entertaining way of visiting thus allows the public to discover and understand this cultural heritage asset. Children and their families are also invited on a treasure hunt: coins bearing the effigy of the Popes, hidden in 3D objects that can be manipulated, can be found throughout the tour. Avignon tourism invites to this experience of virtual immersion in the past, in the heart of Europe's largest Gothic palace. Developed by Histoverly, a start-up of the French Tech Culture, an association based in Avignon, this system brings together regional actors. Within the framework of a regular cultural animation organised throughout the year, consisting of thematic and educational exhibitions, thematic visits and concerts, in the Courtyard of Honour of the palace also takes place the Avignon Festival, with immersive shows powered by both image and sound.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • https://whc.unesco.org/en/list/228/ • https://www.palais-des-papes.com/en/actualite • https://avignon-tourisme.com/en/activities/palace-of-the-popes/ • https://www.wikivirtualreality.com/it/histopad-la-realta-aumentata-resuscita-il-lustro-dei-luoghi-storici • https://www.see Provence.com/news/avignon-s-main-attraction-gets-augmented-reality-avignon-709626 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	
Keywords <i>transversal tags among different fields</i>	<p>Ancient constructions</p> <p>Conservation</p>	

of research (add text)	Preservation Valorisation
Image/s of the best practice nr. 1/3 image/s to identify the type of best practice	 http://static.apidae-tourisme.com/filestore/objets-touristiques/documents/128/194/8438400.pdf
	 http://static.apidae-tourisme.com/filestore/objets-touristiques/documents/128/194/8438400.pdf
	 http://static.apidae-tourisme.com/filestore/objets-touristiques/documents/128/194/8438400.pdf

2. IDENTIFICATION OF THE HERITAGE ASSET

BP_012

Name <i>name by which the heritage asset is known</i> (add text)	Palace of the Popes	
Alternative names (if any) <i>names by which the asset has been known in the past</i> (add text)	Papal Palace	
Designation and Protection (if any) (select from list)	No protection	
	Local listing (a monument, building, urban area or landscape which is listed on a local register for protection)	
	National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection)	
	International protection (i.e. UNESCO World Heritage)	
Source (if any) <i>the body or information system on which the heritage asset is registered</i> (add text)	UNESCO World Heritage List	
Reference number (if any) <i>identification of this heritage asset within the information system</i> (add text)	228	
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> (add image/s and source/s)		https://avignon-tourisme.com/en/activites/palace-of-the-popes/

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Avignon
		Address	Pl. du Palais
		Country	France
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Monumental residence of the sovereign pontiffs		
		Century	14th century		
		Start year	1352		
		End year			
		Function	Museum		
	Time period (select from list)	Century	20th-21st century		
		Start year	1907		
		End year			
		Function			
		Century			
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Ancient period			
		Post industrial revolution period			
		Event	Realisation		
		Actor	Pope Benedetto XII and Pope Clemente VI		
		Century	14th century		
Start year		1334			
End year		1352			
Event		Opening to the public tourism			
Actor					
Century		20th-21st century			
Start year		1907			
End year					
Event		Avignon Festival (in the Courtyard of Honour of the palace)			
Actor		Avignon tourism			
Century		20th-21st century			
Start year	1947				
End year					
OTHER	Investigation status (select from list)	Un-documented			
		Archived			
		Studied			
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology			
		Artisanry			
		Authorship			
		Knowledge/ideas			
		Performance			
		Rituals/festivals/folklore/ceremonies			
		Social activities/practices			
		Traditional arts			
		Traditional communication means			
		Traditional construction systems			
		Traditional craftsmanship			
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)		Spiritual value	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
THE HERITAGE ARTEFACT (the main characteristics of)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved

OTHER			Frescoes	
			Graffiti	
			Mosaics	
		Digital	Art	
			Virtual reality	
	Time period <i>(select from list)</i>	Ancient period		
		Post industrial revolution period		
		Event	Execution	
		Actor	Matteo Giovannetti	
		Century		
		Start year		
		End year		
	Temporal <i>significant events in the history of the heritage artefact</i> <i>(add text)</i>			
		Investigation status <i>(select from list)</i>	Un-documented	
			Archived	
			Studied	
	Exhibited			
	Preserved			
	Recorded			
	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Artefact typology		
		Artisanship		
		Authorship		
		Knowledge/ideas		
		Performance		
		Rituals/festivals/folklore/ceremonies		
		Social activities/practices		
		Traditional arts		
		Traditional communication means		
		Traditional construction systems		
		Traditional craftsmanship		
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)		

3. CHARACTERISATION OF THE BEST PRACTICE

BP_012

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Palace rooms		
	Courtyard of Honour		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	—	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	3D technologies Augmented reality Geolocation system		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Documentation of CH; Communication of CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Communication of CH
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals



Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

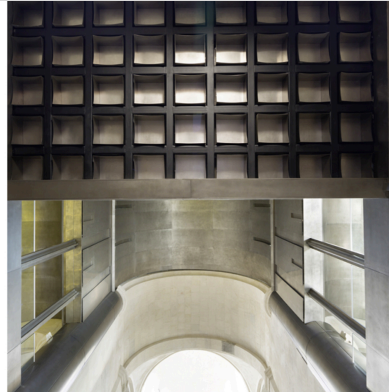
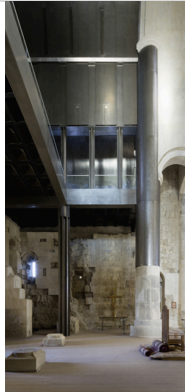
4. SYNTHESIS SHEET

BP_012

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH	Skills on digitalisation				
•	•	•	Communication of CH	Skills on digitalisation			Skills on training and educational activities	
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
		•	Dissemination through publications					
		•	Organisation of events and festivals					Skills on implementing measures to encourage people to practice heritage
		•	Encounters with communities					
		•	Educational activities and programmes					
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_013
Best practice ref. <i>identification code (add text)</i>	BP_013	
Object <i>object of the case study (add text)</i>	BAGRATI CATHEDRAL, KUTAISI, GEORGIA	
Intervention <i>subject of the case study (add text)</i>	Rehabilitation of an ancient cathedral with relationship between old and new	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2011
	End date	2012
Actors <i>main actors involved (add text)</i>	Arch. Andrea Bruno and Arch. Ivane Gremelashvili (architecture design), Arch. Vakhtang Zeseshvili (coordination), Ltd. Kapiteli, Ing. Zura Oqroshidze and Ing. Levan Kurtanidze (structural design), Ltd. Restavretorebu & Co. (restoration company for masonry and stone restoration), Ltd. Magi Style (restoration company for the structure in steel). Collaboration with Milan Ingegneria SpA and DMM SpA	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Winner of the International Architecture Restoration Prize 2012 "Fassa Bortolo Domus Restoration and Preservation", the restoration project of the Bagrati Cathedral represents the answer to the local authorities requests to be able to rehabilitate an ancient sacred building, a symbol of the cultural and religious history of Georgia and to avoid the release of the monument from the World Heritage List in which the cathedral was officially registered in 1994. As a matter of fact, UNESCO wanted the ruins of the cathedral to stay as they were otherwise they would have removed the site from its protection, while the Georgian Orthodox Church wanted to rebuild the cathedral that represents an important religious symbol. The situation was deadlocked. They entrusted the project to architect Andrea Bruno, among the most experienced in the resolution of such issues and challenges. The project is a reasoned compromise between maintaining some of the reconstruction works already made and the realisation of completions and additions inspired by contemporary restoration concepts: using new materials and technologies compatible with the building and surrounding site. The attention to all the mentioned aspects has led to the realisation of a new structure which faithfully traces the scheme of the original structure, giving the possibility for a new and additional museographic use of the building. The project managed to fuse contemporary solutions adapting them to the composition of the medieval architecture, pulling together Touch and Peltrox finishes, glass and the original stone, and completing the construction that was needed in several parts of the ruins. The work is of considerable complexity, given the need to intervene on vaults, floors, walls, columns, lofts and an elevator shaft tower.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • T. Meladze, Y. Uekita, <i>Reconstructing the Sacred: The Controversial Process of Bagrati Cathedral's Full-scale Restoration and Its World Heritage Delisting</i>, in "International Journal of Cultural Property", 27, 3, 2020, pp. 375-396. • https://whc.unesco.org/en/news/637 • https://www.premiorestauro.it/documents/69803/89009/Bruno+boards_.pdf/df66b465-299e-4bde-a39d-342d1b0ec4b5 • http://buromilan.com/en/project/bagrati-cathedral-restoration-kutaisi-georgia/ • https://www.dmmitalia.com/progetti/progetti/restauro-cattedrale-bagrati-in-peltrox/ 	

Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>UNESCO, <i>Final act of the Intergovernmental Conference on the Protection of Cultural Property in the Event of Armed Conflict</i>, 1954, https://unesdoc.unesco.org/ark:/48223/pf0000082464.</p> <p>Vv.Aa., <i>Lima Declaration for Disaster Risk Management of Cultural Heritage</i>, 2010, https://www.icomositalia.com/_files/ugd/57365b_452c480e9ba54686ba2f6c22b0d52b9e.pdf.</p> <p>UNESCO, <i>Warsaw Recommendation on Recovery and Reconstruction of Cultural Heritage</i>, 2018, https://whc.unesco.org/en/news/1826.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>Assets with signs of conflicts/natural hazards</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  </div> <div> <p>https://www.premiorrestauro.it/documents/69803/89009/Bruno+boards_.pdf/df66b465-299e-4bde-a39d-342d1b0ec4b5</p> </div> <div>  </div> <div> <p>https://www.premiorrestauro.it/documents/69803/89009/Bruno+boards_.pdf/df66b465-299e-4bde-a39d-342d1b0ec4b5</p> </div>



https://www.premiorrestauro.it/documents/69803/89009/Bruno+boards_.pdf/df66b465-299e-4bde-a39d-342d1b0ec4b5

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Kutaisi
		Address	Bagrati Street
		Country	Georgia
		Continent	Europe (outside the European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function	Cathedral
		Century	11st-16th century
		Start year	
		End year	
	Time period (select from list)	Function	Museum
		Century	21st century
		Start year	2012
		End year	
	Temporal significant events in the history of the heritage asset (add text)	Ancient period	
		Post industrial revolution period	
		Event	Realisation
		Actor	
		Century	10th-11st century
		Start year	
		End year	
Event		Destruction with roof and dome collapse	
Actor		Ottoman troops	
Century		16th century	
Start year			
End year			
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	
		Artisanry	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
Traditional communication means			
Traditional construction systems			
Traditional craftsmanship			
	Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Symbol of the cultural and religious identity of Georgia	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
THE HERITAGE ARTEFACT (the main characteristics of)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved

OTHER

3. CHARACTERISATION OF THE BEST PRACTICE

BP_013

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Entire monument		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Touch and Peltrox	
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage crimes)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of restoration;

		<i>standards, replicable strategies)</i>	Reconstruction; Adaptive re-use of CH; Accessibility
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

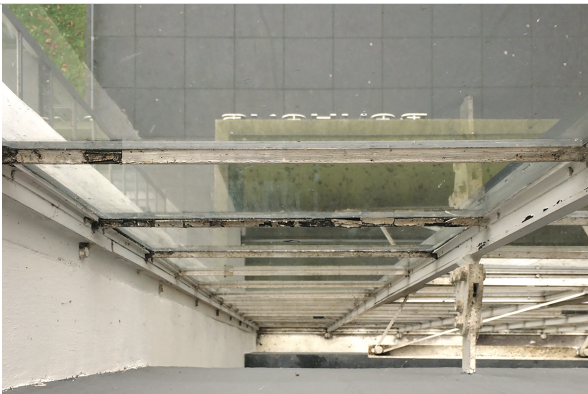

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_013

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials	
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Reconstruction			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Adaptive re-use of CH			Skills on implementing measures to encourage people to practice heritage	
			• Accessibility			Skills on implementing measures to encourage people to practice heritage	
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_014
Best practice ref. <i>identification code (add text)</i>	BP_014	
Object <i>object of the case study (add text)</i>	BAUHAUS BUILDING, DESSAU, GERMANY	
Intervention <i>subject of the case study (add text)</i>	Conservation/Preservation of industrially-produced materials and Valorisation of use of a 20th century architecture	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	20th-21st century
	Start date	1996
	End date	2006
Actors <i>main actors involved (add text)</i>	Brambach + Ebert Architekten, Pfister Schiess Tropeano & Partner Architekten, Bauhaus Dessau Foundation	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The intervention of preservation carried out between 1996 and 2006 at the Bauhaus building in Dessau can be considered of great relevance with regard to the conservation of industrially-produced materials. Of particular interest are the window frames of the building, which present different materials, technologies and typologies: glass panes coexist with hot rolled steel window profiles in the original windows of the 1920s; the glass walls introduced in the 1970s show an aluminium structure; glass-stop in stucco are present in some windows while, in other ones, glass panes are stopped by more recent metal profiles. The intervention carried out for the window frames appears relevant for the adopted methodology: it studied and analysed all these components, and chose to preserve them as material proofs of the history and transformation of the building over time. Other materials were preserved in their stratifications, also through the subsequent maintenance practices. This occurred especially for the floors materials, such as Triolin, Magnesite and Terrazzo. Here conservation was accompanied by distinguishable integrations, realised for example in Linoleum. In the following years, reflections about the use vocation were carried out too. In this regard, the decision to translate the offices of the Bauhaus Dessau Foundation from the workshop wing (with extended spaces and wide transparent surfaces) to the northern wing (with little rooms and smaller dispersant areas) represents an operation that takes into account both consumes containment through reflections able to link use vocation, space dimensions and thermic dispersions, and the purposes of users wealth, respect for the environment, costs reduction and building preservation. The Bauhaus building is included in the list of 2017 grants awarded (grant support: € 135,000) by Keeping It Modern, a grant initiative by The Getty Foundation focused on supporting model projects for the conservation of modern architecture.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • Černá I., Hammer I. (eds.), <i>Materiality</i>. Proceeding of the International Symposium on the Preservation of Modern Movement Architecture, Brno 27-29 April 2006, Muzeum mesta Brna & Hornemann Institut, Brno 2008. • Markgraf M. (ed.), <i>Archaeology of Modernism. Renovation Bauhaus Dessau</i>, Jovis, Berlin 2006. • Walter Gropius, <i>Bauhaus Building in Dessau, 1926</i>. Brambach und Edert Architekten and Pfister Schiess Tropeano & Partner, conservation of the Bauhaus Building in Dessau, Dessau, Germany 1996-2006, in "A&U: architecture & urbanism", n. 474, marzo 2010, pp. 58-67. • https://www.bauhaus-dessau.de/en/restoration-work.html 	

	<ul style="list-style-type: none"> https://www.getty.edu/foundation/initiatives/current/keeping_it_modern/grants_awarded_2017.html
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>I dieci punti del comitato dei monumenti moderni</i>, in F. Perego, <i>Monumenti moderni, un'emergenza nuova</i>, in "Edilizia Popolare", 216-217, 1991, p. 48.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of 20th Century Architectural Heritage</i>, Madrid Document, 2011, http://orcp.hustoj.com/wp-content/uploads/2016/04/madriddocumentenglish.pdf.</p> <p>The Getty Conservation Institute, <i>A Colloquium to Advance the Practice of Conserving Modern Heritage</i>, 2013, https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/colloquium_report.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of Twentieth-Century Architectural Heritage</i>, Madrid Document, 2014, http://www.icomos-isc20c.org/pdf/madrid_doc_10.26.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches to the Conservation of Twentieth-Century Cultural Heritage</i>, Madrid-New Delhi Document, 2017, http://www.icomos-isc20c.org/pdf/madrid-new-delhi-document-2017.pdf.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>20th century architectural heritage</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  <p>Photo: Giulia Favaretto, 2017</p> </div> <div>  <p>Photo: Giulia Favaretto, 2017</p> </div>



Bauhaus Dessau
Foundation Archive,
2014

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Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Dessau
		Address	Gropiusallee 38
		Country	Germany
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Educational centre with dormitories
		Century	20th century
		Start year	1926
		End year	1932
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation
		Actor	Walter Gropius
		Century	20th century
		Start year	1925
		End year	1926
		Event	Restoration intervention
		Actor	Vv.Aa.
		Century	20th century
		Start year	1976
		End year	1976
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisan ship	
		Authorship	Walter Gropius
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Modern Movement masterpiece

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
	Time period (select from list)	Digital	Art
			Virtual reality
		Ancient period	
		Post industrial revolution period	
		Event	
	Temporal <i>significant events in the history of the</i>	Actor	
		Century	

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_014

Type of best practice <i>(select from list)</i>	Conservation
	Preservation
	Valorisation

Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Window frames
	Floors
	Spaces reuse

Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	
	Concrete	
	Concrete derivatives	Magnesite, Terrazzo
	Glass materials	Glass
	Metal materials	Hot rolled steel window profiles, Aluminium
	Paints, varnishes and enamels	
	Plasters	
	Polymeric materials	Triolin, Linoleum
	Marbles, travertines, stones and granites	
	Vegetable, mineral and animal fibres	
	Wood	
	Wood derivatives	

Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)
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Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—
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Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Public and private heritage institutions responsible for managing monuments and sites
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Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Maintenance practices; Adaptive re-use of CH

	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Project of restoration; Adaptive re-use of CH
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Promotion and support of interventions for conservation
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_014

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials		Skills on taking care of Cultural Heritage materials			
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices		Skills on taking care of Cultural Heritage materials			
			• Management and administration practices					
			• Promotion and support of interventions for conservation				Skills on encouraging and supporting the development of networks	
			• Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)		
			• Reconstruction					
			• Adaptive re-use of CH		Skills on achievement of environmental challenges and objectives	S Skills on organisation and logistics of complex situations (management of		

[illegible]


1. CASE STUDY (INTRODUCTION)		BP_015
Best practice ref. identification code <i>(add text)</i>	BP_015	
Object object of the case study <i>(add text)</i>	CONGRESS HALL, NUREMBERG, GERMANY	
Intervention subject of the case study <i>(add text)</i>	Adaptive re-use of a National Socialist Party congress hall	
Temporal time period of the intervention, referred to the actions/activities of the case study <i>(add text)</i>	Century	20th-21st century
	Start date	1998
	End date	2001
Actors main actors involved <i>(add text)</i>	Günther Domenig	
Description of the best practice Brief abstract <i>(add text)</i>	<p>Even today, in the area used to host the National Socialist Party congresses in the south of Nuremberg, gigantic architectural remains bear witness to the regime's megalomania. Covering an area of 11 square kilometres, the Congress Hall was intended to provide a monumental backdrop for the party's self-celebration. The Congress Hall is the largest building the Nazism wanted in Germany, although it was never completed. This arena, designed to hold 50.000 people and designed on the image of Colosseum, is today home to the Documentation Centre "Dokumentationszentrum Reichsparteitagsgelände". As a matter of fact, the Nuremberg Municipal Museums proposed housing a Documentation Center in the Congress Hall and, on that basis, an international architectural competition was announced in 1998. The Documentation Centre opened in 2001 and, since that year, it houses a permanent exhibition on the causes, contexts and consequences of the National Socialist tyranny. The focus of the exhibition areas, in chronological order, is the history of the National Socialist Party congresses and of how these mass gatherings were used for the party propaganda. The exhibition continues outside with large panels providing additional information on the history of the various corners of the National Socialist Party congress area. Special exhibitions are also organised in the Documentation Centre. The educational forum offers numerous study programmes for school classes and youth groups, as well as for adult groups, providing various insights. In the exhibition halls, the walls themselves, preserved in their material consistency, become part of the documentation. The new steel and glass additions are clearly distinguishable. The new system of horizontal and vertical pathways declares its independence from the existing building and speaks a contemporary architectural language. UNESCO included this institution in its International Year for the Culture of Peace. Moreover, in 2002, the Documentation Center was awarded the Silver Otter from the British Guild of Travel Writers as the best overseas tourism project.</p>	
Bibliography and sitography main sources referred to the best practice <i>(add text)</i>	<ul style="list-style-type: none"> • https://museums.nuernberg.de/documentation-center/ • https://www.domusweb.it/it/architettura/2002/04/16/affrontare-l-architettura-del-male.html • https://tourismus.nuernberg.de/old/it/giri-turistici/musei/centro-di-documentazione.html 	
Documental references	CH general criteria framework (common framework, documents, CH)	



<https://www.domusweb.it/it/architettura/2002/04/16/affrontare-il-progetto-architettonico-del-male.html>

2. IDENTIFICATION OF THE HERITAGE ASSET

BP_015

Name <i>name by which the heritage asset is known</i> (add text)	Congress Hall	
Alternative names (if any) <i>names by which the asset has been known in the past</i> (add text)	n.a.	
Designation and Protection (if any) (select from list)	No protection Local listing (a monument, building, urban area or landscape which is listed on a local register for protection) National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection) International protection (i.e. UNESCO World Heritage)	
Source (if any) <i>the body or information system on which the heritage asset is registered</i> (add text)	—	
Reference number (if any) <i>identification of this heritage asset within the information system</i> (add text)	—	
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> (add image/s and source/s)		https://www.domusweb.it/it/architettura/2002/04/16/affrontare-l-architettura-del-male.html

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Nuremberg
		Address	Bayernstraße 100
		Country	Germany
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Congress hall
		Century	20th century
		Start year	1935
		End year	Unfinished
	Time period (select from list)	Function	Venue for exhibitions and fairs
		Century	20th-21st century
		Start year	1949
		End year	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Ancient period	
		Post industrial revolution period	
		Event	Realisation
		Actor	Ludwig and Franz Ruff
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Memorial value

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type <i>(of the artefact asset)</i> (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
		Digital	Mosaics
			Art
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i>	Event	
		Actor	
		Century	
		Start year	

	<i>(add text)</i>	End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_015

Type of best practice <i>(select from list)</i>	Conservation Preservation Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Congress Hall		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials Ceramic materials Concrete Concrete derivatives Glass materials Metal materials Paints, varnishes and enamels Plasters Polymeric materials Marbles, travertines, stones and granites Vegetable, mineral and animal fibres Wood Wood derivatives	Brick Reinforced concrete Glass Steel Granite	
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES TRANSFERABILITY	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i> <i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i> <i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Documentation of CH; Project of restoration; Adaptive re-use of CH

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities



4. SYNTHESIS SHEET

BP_015

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			<ul style="list-style-type: none">Historic and bibliographic research					
			<ul style="list-style-type: none">Studies on CH					
			<ul style="list-style-type: none">Documentation of CH			Skills on training and educational activities		
			<ul style="list-style-type: none">Communication of CH					
			<ul style="list-style-type: none">Preventive conservation					
			<ul style="list-style-type: none">Diagnostic activities					
			<ul style="list-style-type: none">Identification of the risks and deterioration patterns					
			<ul style="list-style-type: none">Materials conservation tests					
			<ul style="list-style-type: none">Pre-consolidation, cleaning, consolidation and protection of CH materials					
			<ul style="list-style-type: none">Reinforcement of CH buildings					
			<ul style="list-style-type: none">Monitoring					
			<ul style="list-style-type: none">Maintenance practices					
			<ul style="list-style-type: none">Management and administration practices					
			<ul style="list-style-type: none">Promotion and support of interventions for conservation					
			<ul style="list-style-type: none">Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)		
			<ul style="list-style-type: none">Reconstruction					
			<ul style="list-style-type: none">Adaptive re-use of CH			Skills on implementing measures to encourage people to practice heritage		
			<ul style="list-style-type: none">Accessibility					
			<ul style="list-style-type: none">Dissemination through publications					
			<ul style="list-style-type: none">Organisation of events and festivals					
			<ul style="list-style-type: none">Encounters with communities					
			<ul style="list-style-type: none">Educational activities and programmes					Skills on training and educational activities
			<ul style="list-style-type: none">Creation of partnership and networking					

		• Advertisements with CH					
		• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_016
Best practice ref. <i>identification code (add text)</i>	BP_016	
Object <i>object of the case study (add text)</i>	NEUES MUSEUM, BERLIN, GERMANY	
Intervention <i>subject of the case study (add text)</i>	Restoration of a building in ruin	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	20th-21st century
	Start date	1998
	End date	2009
Actors <i>main actors involved (add text)</i>	David Chipperfield Architects London & Berlin, in collaboration with Julian Harrap	
Description of the best practice <i>Brief abstract (add text)</i>	<p>In 2009, after more than sixty years as a ruin, the Neues Museum reopened to the public as the third restored building on Museum Island, exhibiting the collections of the Egyptian Museum and the Museum of Pre- and Early History. The key aim of the restoration project of the Neues Museum was to recomplete the original volume, and encompassed the repair and preservation of the parts that remained after the destruction of the Second World War. The original sequence of rooms was restored with new building sections that create continuity with the existing structure. The restoration followed the guidelines of the Charter of Venice, respecting the historical structure in its different states of preservation. All the gaps in the existing structure were filled in without competing with the existing structure in terms of brightness and surface. The restoration of the existing is driven by the idea that the original structure should be emphasized in its spatial context and original materiality: the new reflects the lost without imitating it. The new exhibition rooms are built of large format pre-fabricated concrete elements consisting of white cement mixed with Saxonian marble chips. Formed from the same concrete elements, the new main staircase repeats the original without replicating it, and sits within a majestic hall that is preserved only as a brick volume, devoid of its original ornamentation. There are rooms defined by fragments of plaster, distressed but recognisable classical columns, and vaults of hollow clay pots. The war signs have been preserved as intangible heritage bearing witness to a past history. Other new volumes (the Northwest wing, with the Egyptian court and the Apollo salit, the apse in the Greek courtyard, and the South Dome) are built of recycled handmade bricks, complementing the preserved sections. With the reinstatement and completion of the mostly preserved colonnade at the Eastern and Southern side of the Neues Museum, the pre-war urban situation is re-established to the East. A new building, the James-Simon-Galerie, between the Neues Museum and the Kupfergraben canal, echoes the urban situation of the site pre-1938. The intervention carried out at the Neues Museum is the recipient of the 2011 European Union Prize for Contemporary Architecture – Mies van der Rohe Award.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • <i>Neues Museum Berlin. David Chipperfield Architects in collaboration with Julian Harrap, Walther König, 2009.</i> • https://davidchipperfield.com/project/neues_museum • https://www.architectural-review.com/today/neues-museum-by-david-chipperfield-architects-berlin-germany • https://www.buildingconservation.com/articles/neuesmuseum/neuesmuse 	

	<p>um.htm</p> <ul style="list-style-type: none"> • https://www.archdaily.com/126727/david-chipperfields-neues-museum-receives-2011-mies-van-der-rohe-award • https://www.museumsinsel-berlin.de/en/buildings/neues-museum/ • https://whc.unesco.org/en/list/896/
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>UNESCO, <i>Final act of the Intergovernmental Conference on the Protection of Cultural Property in the Event of Armed Conflict</i>, 1954, https://unesdoc.unesco.org/ark:/48223/pf0000082464.</p> <p>Vv.Aa., <i>Lima Declaration for Disaster Risk Management of Cultural Heritage</i>, 2010, https://www.icomositalia.com/_files/ugd/57365b_452c480e9ba54686ba2f6c22b0d52b9e.pdf.</p> <p>UNESCO, <i>Warsaw Recommendation on Recovery and Reconstruction of Cultural Heritage</i>, 2018, https://whc.unesco.org/en/news/1826.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>Assets with signs of conflicts/natural hazards</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  <p>https://davidchipperfeld.com/project/neues_museum</p> </div> <div>  <p>https://davidchipperfeld.com/project/neues_museum</p> </div>



https://davidchipperfield.com/project/neues_museum

<https://davidchipperfield.com/project/neues-museum>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Berlin
		Address	Museum Island, Bodestraße 1-3
		Country	Germany
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	First building of the “sanctuary for art and science” envisioned
	Time period (select from list)	Century	19th century
		Start year	1859
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	End year	1938
		Ancient period	
		Post industrial revolution period	
		Event	Realisation
		Actor	Friedrich August Stüler
		Century	19th century
		Start year	1841
		End year	1859
		Event	Extensive bombing
		Actor	Second World War
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanry	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	
		Past and war signs	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
	Time period (select from list)	Digital	Mosaics
			Art
			Virtual reality
		Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the</i>	Event	
		Actor	
		Century	

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_016

Type of best practice <i>(select from list)</i>	Conservation
	Preservation
	Valorisation

Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Neues Museum
	Museum Island

Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	Brick
	Concrete	Concrete elements consisting of white cement mixed with Saxonian marble chips
	Concrete derivatives	
	Glass materials	
	Metal materials	
	Paints, varnishes and enamels	
	Plasters	Plaster
	Polymeric materials	
	Marbles, travertines, stones and granites	
	Vegetable, mineral and animal fibres	
	Wood	
	Wood derivatives	

Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage crimes)
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Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—
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Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists
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Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	Project of restoration

	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of restoration; Dissemination through publications
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	





Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_016


Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration		Skills on organisation and logistics of complex situations (management of means and resources)	Skills on organisation and logistics of complex situations (management of means and resources)		
			• Reconstruction					
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications			Skills on training and educational activities		
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_017
Best practice ref. identification code (add text)	BP_017	
Object object of the case study (add text)	PARK OF THE VARUS BATTLE, KALKRIESE, BRAMSCHE, GERMANY	
Intervention subject of the case study (add text)	Didactic and evocative interpretation of a natural landscape	
Temporal time period of the intervention, referred to the actions/activities of the case study (add text)	Century	20th-21st century
	Start date	1998
	End date	2006
Actors main actors involved (add text)	Gigon/Guyer architect, Zulauf & Partners landscape architect, with designers Ruedi Baur, Philippe Dèlis and Lars Müller	
Description of the best practice Brief abstract (add text)	<p>The Park of the Varus Battle is an example of a landscape project on a very special archaeological site, characterised by the exclusive presence of clues and stratigraphy linked to an isolated event, the Varus Battle which took place in 9 AD. After the discovery of the site in 1987, archaeological excavations were started. The immediate public interest in the site led to the decision to realise an archaeological park and museum where visitors could learn about the local history and evolution of the landscape. A competition to design the entire area, consequent and parallel to the development of the archaeological excavations, was won in 1998 by the architects Annette Gigon and Mike Guyer from Zurich, with advice from the landscape architecture firm Zulauf & Partners in Baden, and designers Ruedi Baur, Philippe Dèlis and Lars Müller. The conclusion of the first phase of implementation was in 2006. In the site, the system of archaeological traces became the plot around which a story was woven, developed by the designers and linked to the events of the site. The terms with which the authors drew the plot of this text were landscape components, morphology, vegetation and the grid of agricultural patterns. The semantic characterisation of the project is essentially linked to the process of narration, developed through a code of signs calibrated to stimulate the visitor's imagination in the mental reconstruction of the battle. Within this landscape, there is a combination of didactic intent, based on the historical and archaeological data available on the site, and evocative intent, based on a subjective interpretation that leads the visitor to follow both the material and immaterial traces of the two armies. This dual interpretation permeates the entire landscaping, juxtaposing, for example, the main museum building and the route system with a series of semantic nodes made up of small isolated pavilions dedicated to different aspects of reading the site.</p>	
Bibliography and sitography main sources referred to the best practice (add text)	<ul style="list-style-type: none"> Matteini T., <i>Paesaggi del tempo. Documenti archeologici e rovine artificiali nel disegno di giardini e paesaggi</i>, Alinea, Firenze 2009. https://www.gigon-guyer.ch/en/project/archaeological-museum-kalkriese/ https://arquitecturaviva.com/works/parque-museo-kalkriese https://www.designboom.com/architecture/9sekundens-short-film-varus-battle-museum-gigon-guyer-germany-10-23-2020/ https://www.thisispaper.com/mag/varus-battle-museum-gigon-guyer 	
Documental references (add text)	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS, <i>Florence Charter</i>, 1981, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_baf8432e213a404dbdadef5171b7df</p>	

	<p>90.pdf.</p> <p>Council of Europe, <i>European Landscape Convention</i>, 2000, https://rm.coe.int/1680080621.</p> <p>ICOMOS-IFLA, <i>ICOMOS-IFLA Document on Historic Urban Public Parks</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_35cc0006820a47298626dc214cedb11b.pdf.</p> <p>ICOMOS-IFLA, <i>ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage</i>, 2017, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_cd7200d8a8b04613b4456f230c433a15.pdf.</p>
Keywords <i>transversal tags among different fields</i>	<p>Landscape and historical gardens</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  <p>https://www.gigon-guyer.ch/en/project/archaeological-museum-kalkriese/</p> </div> <div>   <p>https://www.gigon-guyer.ch/en/project/archaeological-museum-kalkriese/</p> </div> <div>  <p>https://www.gigon-guyer.ch/en/project/archaeological-museum-kalkriese/</p> </div>

2. IDENTIFICATION OF THE HERITAGE ASSET

BP_017

Name <i>name by which the heritage asset is known</i> (add text)	Park of the Varus Battle	
Alternative names (if any) <i>names by which the asset has been known in the past</i> (add text)	Park of the Battle of Teutoburg Forest	
Designation and Protection (if any) (select from list)	No protection Local listing (a monument, building, urban area or landscape which is listed on a local register for protection) National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection) International protection (i.e. UNESCO World Heritage)	
Source (if any) <i>the body or information system on which the heritage asset is registered</i> (add text)	—	
Reference number (if any) <i>identification of this heritage asset within the information system</i> (add text)	—	
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> (add image/s and source/s)		Matteini T., <i>op. cit.</i> , p. 103.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Kalkriese, Bramsche
		Address	Venner Str. 69
		Country	Germany
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) <i>(select from list)</i>	Route	
		Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Natural landscape
	Time period (select from list)	Century	
		Start year	
		End year	
		Ancient period	
		Post industrial revolution period	
		Event	Site of the Battle of Varo
		Actor	Roman legions and Teutons
		Century	1st century
		Start year	9 AD
		End year	9 AD
		Event	Site discovery
		Actor	Archaeologist Tony Clunn
		Century	20th century
		Start year	1987
End year	1987		
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanry	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Memory of a battle

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
		Time period (select from list)	Ancient period
		Post industrial revolution period	
Temporal <i>significant events in the history of the</i>	Event		
	Actor		
	Century		

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_017

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Park		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Metal, rusty steel	
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Communication of CH; Accessibility; Educational activities and programmes


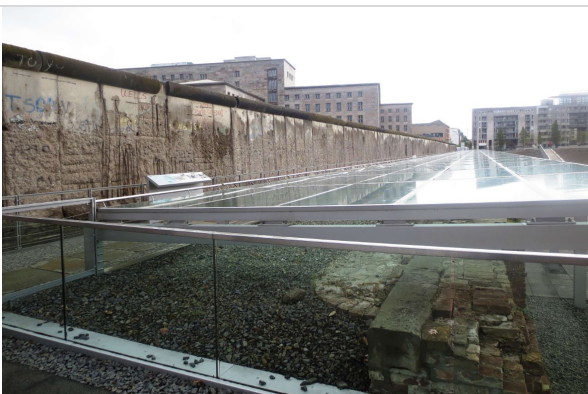
		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

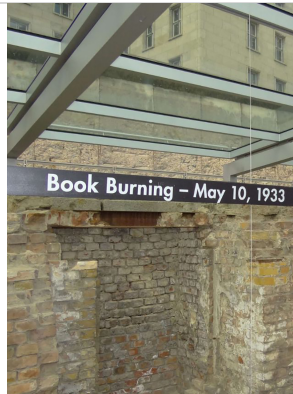
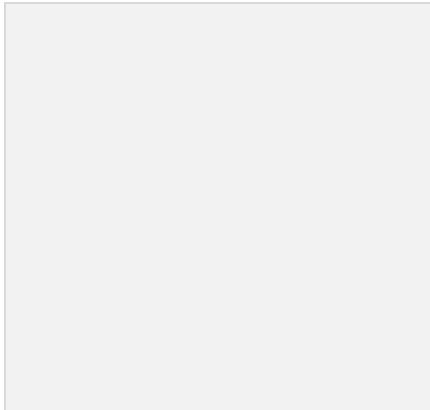
Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_017

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH			Skills on implementing measures to encourage people to practice heritage	
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials				
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration				
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility			Skills on implementing measures to encourage people to practice heritage	
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes			Skills on training and educational activities	
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

	<p>ICOMOS ISC20C, <i>Approaches for the Conservation of 20th Century Architectural Heritage</i>, Madrid Document, 2011, http://orcp.hustoj.com/wp-content/uploads/2016/04/madriddocumentenglish.pdf.</p> <p>The Getty Conservation Institute, <i>A Colloquium to Advance the Practice of Conserving Modern Heritage</i>, 2013, https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/colloquium_report.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of Twentieth-Century Architectural Heritage</i>, Madrid Document, 2014, http://www.icomos-isc20c.org/pdf/madrid_doc_10.26.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches to the Conservation of Twentieth-Century Cultural Heritage</i>, Madrid-New Delhi Document, 2017, http://www.icomos-isc20c.org/pdf/madrid-new-delhi-document-2017.pdf.</p>
<p>Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i></p> <p>Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i></p>	<p>20th century architectural heritage</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p> <div>  </div> <div> <p>https://www.domusweb.it/en/architecture/2010/05/12/wilms-heinle-wischer--partner--topography-of-terror.html</p> </div> <div>  </div> <div> <p>https://whichmuseum.com/museum/topography-of-terror-berlin-5393</p> </div>



<https://whichmuseum.com/museum/topography-of-terror-berlin-5393>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Berlin
		Address	Niederkirchnerstraße 8
		Country	Germany
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	
	Political centers	(if other, add text)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Site of the Nazi SS-Gestapo Headquarters	
		Century 20th century	
		Start year 1933	
		End year 1945	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation of the Nazi SS-Gestapo Headquarters
		Actor	National Socialist Party
		Century	20th century
		Start year	1933
		End year	1933
		Event	First project for the Topography of Terror
		Actor	Peter Zumthor
Century		20th century	
Start year		1993	
End year	1993		
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Memorial site		

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the</i>	Post industrial revolution period	
		Event	
		Actor	
		Century	

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Communication of CH; Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_018

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in				
				Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					Skills on implementing measures to encourage people to practice heritage
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials					
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction					
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					Skills on training and educational activities
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_019
Best practice ref. <i>identification code (add text)</i>	BP_019	
Object <i>object of the case study (add text)</i>	BASILICA PALLADIANA, VICENZA, ITALY	
Intervention <i>subject of the case study (add text)</i>	Maximisation of conservation and plant adaptive re-use of a Cultural Heritage asset	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2007
	End date	2012
Actors <i>main actors involved (add text)</i>	Prof. Arch. Eugenio Vassallo, Prof. Arch. Paolo Marconi, Prof. Arch. Salvador Perez Arroyo, Favero & Milan Ingegneria, Tifs Ingegneria, Arch. Andrea Piero Donadello	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Won in 2004, the restoration project of the Basilica Palladiana in Vicenza responded to a twofold challenge: to make usable in a safe and secure manner and to adapt in terms of plant engineering the spaces of this monument without altering its spatial and figurative qualities. The challenge had to be resolved together with the cleaning, consolidation and protection of the stone, brick and decorative apparatus that characterise the basilica and which time has profoundly marked. It was possible to achieve both results by intervening incisively on the neighbouring Corte dei Bissari and by studying a new use of the spaces of the Domus Commestabilis. As a matter of fact, below the courtyard all the plant engineering units relating to electricity, air treatment and fire safety were placed, while in the domus the control room for the entire plant engineering system, the lifts and a staircase were adequately arranged. In the Corte dei Bissari, below the level of the "piazza", storage spaces have also been provided to serve the activities taking place in the great hall of the basilica. Toilets have also been placed in the courtyard, to be used by the existing shops in the basilica. This is to reduce the work to be done in the basilica to the conservation work only, ensuring at the same time the full compliance with safety and hygiene standards and regulations. The interventions planned in the basilica were substantial and complex, but all aimed at its conservation. They are the result of a careful investigation carried out during the design process, which concerned the load-bearing structure of the great hall vault, the identification of the processes of the materials degradation, and the consistency of the vaulting system between the mezzanine and first floors. The most important work carried out was to replace the reinforced concrete load-bearing arches of the vault with wooden ones. This replacement was necessary because of the advanced state of deterioration of reinforced concrete, which was no longer able to meet the safety requirements, and even less so the anti-seismic requirements dictated by the most recent legislation. The replacement only concerned the load-bearing core and had no impact on the figurative and spatial aspects, both inside and outside the hall and the entire basilica. The second and complex intervention involved the cleaning, consolidation and protection of all the internal and external surfaces in stone, brick and plaster. Finally, the necessary works to ensure the passage of the plant engineering networks were carried out, using all the interstices detected during the survey campaign, so as not to produce changes to the current configuration of the spaces and shape. The project won the 2014 European Union Award for Cultural Heritage.</p>	


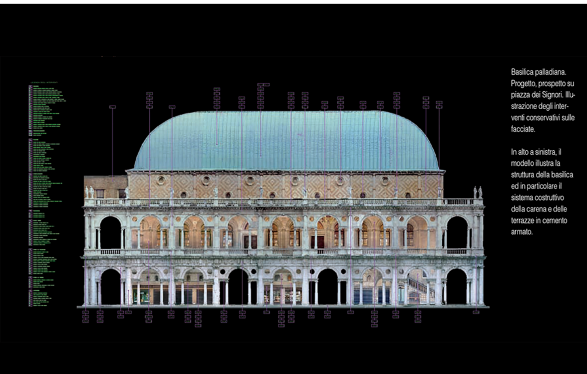
<p>Bibliography and sitography main sources referred to the best practice (add text)</p>	<ul style="list-style-type: none"> • Acoleo A., <i>Restauro del cuore pulsante di Vicenza</i>, 2013, http://www.palladiospa.com/wp-content/uploads/NuovaFinestra_giu2013.pdf. • Milan M., Vassallo E., <i>La Basilica palladiana a Vicenza</i>, in "Progetto&Pubblico", aprile 2007, pp. 22-24. • Milan M., Vassallo E., Donadello A., <i>Progetto, realizzazione, durata e restauro della struttura in calcestruzzo armato della volta della Basilica palladiana di Vicenza</i>, in Ientile R. (ed.), <i>Architetture in cemento armato. Orientamenti per la conservazione</i>, FrancoAngeli, Milano, 2008, pp. 360-392. • http://buromilan.com/project/restauro-conservativo-della-basilica-palladiana-a-vicenza-italia/ • https://www.hsh.info/favero07.htm • https://www.museicivicivicenza.it/it/tbc/basilica_palladiana/premio.php • https://whc.unesco.org/en/list/712/
<p>Documental references (add text)</p>	<p>CH general criteria framework (common framework, documents, CH)</p>
<p>Keywords transversal tags among different fields of research (add text)</p>	<p>Ancient constructions Conservation Preservation Valorisation</p>
<p>Image/s of the best practice nr. 1/3 image/s to identify the type of best practice</p>	<div>  </div> <div> <p>http://www.vicenzareport.it/2016/12/vicenza-basilica-palladiana-esempio-di-innovazione/</p> </div>
	<div>  </div> <div> <p>Milan M., Vassallo E., <i>op. cit.</i>, 2007, p. 23.</p> </div>



Photo:

202

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Vicenza
		Address	Piazza dei Signori
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Basilica		
	Time period (select from list)	Century	15th-21st century		
		Start year	1460		
		End year			
		Ancient period			
		Post industrial revolution period			
		Event	Realisation		
		Actor	Domenico da Venezia		
		Century	15th century		
		Start year	1449		
End year		1460			
Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Reconstruction of the roof with reinforced concrete and wood works			
	Actor	Ferdinando Forlati			
	Century	20th century			
	Start year	1948			
	End year	1948			
	OTHER	Investigation status (select from list)	Un-documented		
			Archived		
			Studied		
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology		
			Artisanhip		
Authorship			Domenico da Venezia, Ferdinando Forlati		
Knowledge/ideas					
Performance					
Rituals/festivals/folklore/ceremonies					
Social activities/practices					
Traditional arts					
Traditional communication means					
Traditional construction systems					
Traditional craftsmanship					
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Symbolic value				

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
	Mosaics		
Digital	Art		
	Virtual reality		
Time period (select from list)	Ancient period		
	Post industrial revolution period		
Temporal	Event		

	<i>significant events in the history of the heritage artefact</i> (add text)	Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects (select from list)	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_019

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Basilica Palladiana		
	Corte dei Bissari		
	Domus Commestabilis		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick	
	Concrete	Reinforced concrete	
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters	Plasters	
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood	Wood	
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	Project of restoration; Adaptive re-use of CH
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Diagnostic activities; Identification of the risks and deterioration patterns; Materials conservation tests; Pre-

		<i>standards, replicable strategies)</i>	consolidation, cleaning, consolidation and protection of CH materials; Reinforcement of CH buildings; Project of restoration; Accessibility
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_019

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation					
•	•		Diagnostic activities			Skills on taking care of Cultural Heritage materials		
•	•		Identification of the risks and deterioration patterns			Skills on taking care of Cultural Heritage materials		
•	•		Materials conservation tests			Skills on taking care of Cultural Heritage materials		
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•		Reinforcement of CH buildings			Skills on organisation and logistics of complex situations (management of means and resources)		
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration		Skills on organisation and logistics of complex situations (management of means and resources)	Skills on organisation and logistics of complex situations (management of means and resources)		
•			Reconstruction					
	•	•	Adaptive re-use of CH		Skills on organisation and logistics of complex situations (management of means and resources)			
	•	•	Accessibility			Skills on organisation		

						and logistics of complex situations (management of means and resources)		
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH					

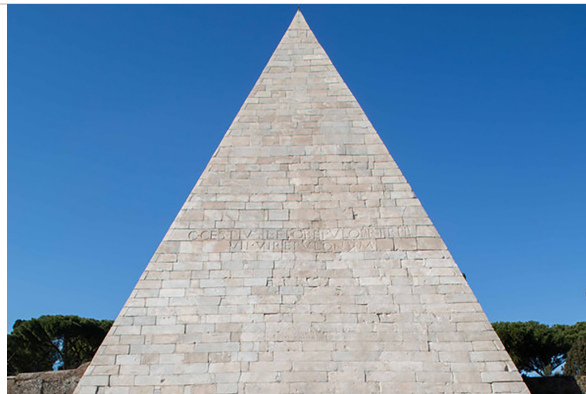
1. CASE STUDY (INTRODUCTION)		BP_020
Best practice ref. identification code (add text)	BP_020	
Object object of the case study (add text)	CESTIA PYRAMID, ROME, ITALY	
Intervention subject of the case study (add text)	Material conservation of a pyramid	
Temporal time period of the intervention, referred to the actions/activities of the case study (add text)	Century	21st century
	Start date	2012
	End date	2015
Actors main actors involved (add text)	Arch. Maria Grazia Filetici, Dr. Rita Paris	
Description of the best practice Brief abstract (add text)	<p>After the company Yagi Tsusho Ltd, chaired by Japanese patron Yuzo Yagi, signed a spontaneous donation agreement with the Soprintendenza Speciale per i Beni Archeologici of Rome in 2012 for the restoration of the Cestia Pyramid, a call for tenders has been issued by the Soprintendenza for the works on the basis of a project drawn up by Arch. Maria Grazia Filetici and Dr. Rita Paris. Preceded by a restoration intervention carried out between 1999 and 2000, which was followed by a programmed maintenance plan for the wall paintings, the intervention carried out between 2012 and 2015 provided for cleaning, consolidation and protection of the external Lunense marble cladding, ensured by stainless steel equipment, designed ad hoc. The paintings of the inner burial chamber were protected from water infiltration. The intervention also envisaged a periodic maintenance, during which the study of the effects of pollution on the marble will be continued. As a matter of fact, the effect of polluted air on the marble's protective layers will be monitored on the four façades of the monument with a view to making an even greater contribution to the conservation of the cultural heritage. The restoration of the Cestia Pyramid won the 2017 edition of the European Union Award for Cultural Heritage / Europa Nostra Awards.</p>	
Bibliography and sitography main sources referred to the best practice (add text)	<ul style="list-style-type: none"> • https://www.soprintendenzaspecialeroma.it/schede/piramide-di-caio-cestio_3006/ • https://www.beniculturali.it/comunicato/il-restauro-della-piramide-di-caio-cestio • https://bollettinodiarcheologiaonline.beniculturali.it/wp-content/uploads/2018/12/BAO_VII_2017_1-2_4_Filetici-Cibrario-De_Monte_Jatta_Molè_Vazio.pdf • https://www.ansa.it/sito/notizie/cultura/arte/2017/04/05/premio-ue-a-restauro-piramide-cestia_7a1cff4e-174a-4c40-8702-f74b4ddc8b17.html • https://www.arte.it/notizie/roma/il-restauro-della-piramide-cestia-vince-l-europa-nostra-awards-2017-12777 • https://roma.repubblica.it/cronaca/2015/04/20/news/piramide-112423807/ 	
Documental references (add text)	CH general criteria framework (common framework, documents, CH)	
Keywords transversal tags among different fields of research	Ancient constructions Conservation Preservation	

Image/s of the best practice

nr. 1/3 image/s to identify the type of best practice



https://www.soprintendenzaspecialeroma.it/schede/piramide-di-caio-cestio_3006/




<https://www.arte.it/notizie/roma/il-restauro-della-piramide-cestia-vince-l-europa-nostra-awards-2017-12777>



https://bollettinodiarcheologiaonline.beniculturali.it/wp-content/uploads/2018/12/BAO_VII_2017_1-2_4_Filefici-Cibrario-De_Monte_Jatta_Molè_Vazio.pdf

BP_020

Name <i>name by which the heritage asset is known</i> (add text)	Cestia Pyramid
Alternative names (if any) <i>names by which the asset has been known in the past</i> (add text)	Caius Cestius Pyramid
Designation and Protection (if any) (select from list)	No protection Local listing (a monument, building, urban area or landscape which is listed on a local register for protection) National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection) International protection (i.e. UNESCO World Heritage)
Source (if any) <i>the body or information system on which the heritage asset is registered</i> (add text)	UNESCO World Heritage List
Reference number (if any) <i>identification of this heritage asset within the information system</i> (add text)	91
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> (add image/s and source/s)	 https://www.soprintendenzaspecialeroma.it/schede/piramide-di-caio-cestio_3006/

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Rome
		Address	Via Ostiense
		Country	Italy
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	
	Pyramids	(if other, add text)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function Sepulchre		
		Century 1st century BC - Middel Ages		
		Start year		
		End year		
	Time period (select from list)	Ancient period		
		Post industrial revolution period		
	Temporal significant events in the history of the heritage asset (add text)	Event	Realisation	
		Actor	Caius Cestius Epulo	
		Century	1st century BC	
		Start year	18 BC	
		End year	12 BC	
		Event	Incorporated into the city walls	
		Actor	Emperor Aurelian	
		Century	3rd century AD	
Start year		272 AD		
End year	279 AD			
	Event	Tomb violation with loss of the cinerary urn		
Actor				
Century	Middle Ages			
Start year				
End year				
OTHER	Investigation status (select from list)	Un-documented		
		Archived		
		Studied		
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	Pyramid	
		Artisanship		
		Authorship		
		Knowledge/ideas		
		Performance		
		Rituals/festivals/folklore/ceremonies		
		Social activities/practices		
		Traditional arts		
		Traditional communication means		
		Traditional construction systems		
		Traditional craftsmanship		
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)		

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality

	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
OTHER	Temporal <i>significant events in the history of the heritage artefact</i> <i>(add text)</i>	Event	Realisation
		Actor	
		Century	1st century BC
		Start year	18 BC
		End year	12 BC
		Investigation status <i>(select from list)</i>	Un-documented
		Archived	
		Studied	
		Exhibited	
		Preserved	
	Recorded		
	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
Artisanship			
Authorship			
Knowledge/ideas			
Performance			
Rituals/festivals/folklore/ceremonies			
Social activities/practices			
Traditional arts			
Traditional communication means			
Traditional construction systems			
	Traditional craftsmanship		
	Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)		

3. CHARACTERISATION OF THE BEST PRACTICE

BP_020

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Pyramid		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick curtain	
	Concrete	Concrete core	
	Concrete derivatives		
	Glass materials		
	Metal materials	Iron nails	
	Paints, varnishes and enamels	Walls decorated with frescoes	
	Plasters	Plasters	
	Polymeric materials		
	Marbles, travertines, stones and granites	External cladding in Lunense marble	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Studies on CH; Identification of the risks and deterioration patterns; Materials conservation tests; Pre-

		<i>standards, replicable strategies)</i>	consolidation, cleaning, consolidation and protection of CH materials; Monitoring; Maintenance practices
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	




Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_020

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns			Skills on taking care of Cultural Heritage materials	
			• Materials conservation tests			Skills on taking care of Cultural Heritage materials	
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials	
			• Reinforcement of CH buildings				
			• Monitoring			Skills on taking care of Cultural Heritage materials	
			• Maintenance practices			Skills on taking care of Cultural Heritage materials	
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration				
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_021
Best practice ref. <i>identification code (add text)</i>	BP_021	
Object <i>object of the case study (add text)</i>	FORUM OF AUGUSTUS, ROME, ITALY	
Intervention <i>subject of the case study (add text)</i>	Valorisation of Cultural Heritage through videogames	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2017
	End date	2019
Actors <i>main actors involved (add text)</i>	REVEAL project (CNR, Museo dei Fori Imperiali, VRTRON)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>In 2019, the video game "A Night in the Forum" was released for Sony Playstation VR. This is the first co-production of a video game for such a relevant platform, made by the CNR in collaboration with a public institution, the Museo dei Fori Imperiali, and with a private company, VRTRON, which handled the development and production. "A Night in the Forum" is a 3D video game set in the Forum of Augustus in Rome and realised thanks to a grant from the European Commission under the H2020 REVEAL "Realising Education through Virtual Environments and Augmented Locations" project (2017-2018). This 3D video game is the first one made in Italy for an archaeological site. It is an "Environmental Narrative Videogame", a narrative genre of setting that involves a story and a mystery that must be revealed, through the immersion of the player within a photo-realistically reconstructed setting and through the discovery of clues that can help. In this kind of game everything is based on the involvement given by the narration and immersion, without the need of characters or other elements. In the case of this video game, it has been used real scenarios acquired in the field with Image-Based Modelling techniques that exploit photogrammetry and computer vision algorithms to build virtual models of real objects by processing digital images with special software. They were thus reconstructed following the sources, in order to be used in a 1st century AD setting. Finally, an engaging story was created, invented but based on historical reference elements. This is in fact the plot of the game: a tourist, left behind during a visit to the Forum of Augustus, picks up an object that projects him back in time. Stuck in the 1st century AD, he has to take on the role of the forum guardian and carry out the tasks assigned to him in order to return home before sunrise. The sounds of the night and the memories of the past will accompany and help him understand the world of the Roman Empire during the reign of Augustus.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> Pescarin S. (ed.), <i>Videogames, Ricerca, Patrimonio Culturale</i>, FrancoAngeli, Milano 2020. Habgood J. et al., <i>The REVEAL educational environmental narrative framework for PlayStation VR</i>, in <i>ECGBL 2018. 12th European Conference on Game-Based Learning</i>, Academic Conferences and publishing limited 2018. https://cordis.europa.eu/project/id/732599/it 	
Documental references	CH general criteria framework (common framework, documents, CH)	

(add text)	<p>ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i>, 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf.</p> <p>Council of Europe, <i>Convention for the Protection of the Archaeological Heritage of Europe</i>, The Valletta Convention, 1992, https://www.coe.int/en/web/culture-and-heritage/valletta-convention.</p> <p>ICOMOS, <i>Salalah Guidelines for the Management of Public Archaeological Sites</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a363f8c4662b.pdf.</p>
<p>Keywords</p> <p><i>transversal tags among different fields</i></p> <p>Image/s of the best practice</p> <p><i>nr. 1/3 image/s to identify the type of best practice</i></p>	<p>Archaeological sites</p> <p>Valorisation</p> <div>  </div> <div>  </div> <div>  </div> <p>Pescarin S., <i>op. cit.</i>, p. 65.</p> <p>Pescarin S., <i>op. cit.</i>, p. 64.</p> <p>Pescarin S., <i>op. cit.</i>, p. 65.</p>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Rome
		Address	Forum of Augustus
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)
	Forum	(if other, add text)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Forum
		Century	1st century BC - 21st century AD
		Start year	2 BC
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Inauguration
		Actor	Gaius Iulius Caesar Augustus
		Century	1st century BC
		Start year	2 BC
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	Gaius Iulius Caesar Augustus
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Symbol of ancient Rome

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
		Immovable	Written evidences
			Carved
			Frescoes
			Graffiti
			Mosaics
			Art
		Digital	Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_021

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Forum of Augustus		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	—	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	3D video games		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Communication of CH; Gamings with CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Gamings with CH

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	


Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_021

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH	Skills on digitalisation				
•	•	•	Preventive conservation					
•	•	•	Diagnostic activities					
•	•	•	Identification of the risks and deterioration patterns					
•	•	•	Materials conservation tests					
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•	•	Reinforcement of CH buildings					
•	•	•	Monitoring					
•	•	•	Maintenance practices					
•	•	•	Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•	•	•	Reconstruction					
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
•	•	•	Dissemination through publications					
•	•	•	Organisation of events and festivals					
•	•	•	Encounters with communities					
•	•	•	Educational activities and programmes					
•	•	•	Creation of partnership and networking					
•	•	•	Advertisements with CH					
•	•	•	Gaming with CH	Skills on digitalisation		Skills on digitalisation		

1. CASE STUDY (INTRODUCTION)		BP_022
Best practice ref. <i>identification code (add text)</i>	BP_022	
Object <i>object of the case study (add text)</i>	GREAT POMPEII PROJECT, ITALY	
Intervention <i>subject of the case study (add text)</i>	Grat project for an archaeological area and its cultural surrounding territory	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2012
	End date	2018
Actors <i>main actors involved (add text)</i>	Italian Ministry of Culture	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Great Pompeii Project is the result of an action by the Italian Government aimed at strengthening the effectiveness of the protection actions and interventions in the archaeological area of Pompeii by drawing up an extraordinary and urgent programme of conservation, prevention, maintenance and restoration interventions. In 2012, it was financed as a EU Great Project using funds from the Interregional Operational Programme "Cultural, Natural Attractions and Tourism" European Fund of Regional Development 2007-20013. In 2016, the request of the Italian Government to obtain an articulation into two phases was accepted: if the first one ended in 2015, the second one ended in 2018 and was financed with resources from the National Operational Plan "Culture and Development" European Fund of Regional Development 2014-2020. The Great Pompeii Project, which aims to the requalification of the archaeological site of Pompeii, is supported and accompanied by a scientific and technical study plan aimed at making diagnoses, deepening scientific knowledge and guiding operational choices. The interventions envisaged by the strategic plan, in line with the provisions of the UNESCO site management plan, are framed within a logic of integrated cultural tourism system, articulated in networks, areas, complexes and intangible actions, to which the individual interventions are functional. The connection networks serve to provide accessibility to the places of cultural tourism interest, favouring the enhancement of historical routes and eco-sustainable mobility. Within this scenario, the Pompeii archaeological park has inaugurated "Pompeii for All", a new route that allows also those with mobility difficulties to enter and visit some of the site's main places. The complex of palaces and cultural emergencies aims to enhance the territory's extensive historical and architectural heritage from a unified perspective. The field of naturalistic and landscape recomposition aims to organically enhance the entire coastal strip and the green areas, including peri-urban ones. The regeneration and recovery of degraded areas, such as disused industrial complexes or railway lines, by adapting their infrastructural dotation, aims at promoting their re-use for cultural tourism. Finally, intangible actions are used to activate wide-ranging digital services and to realise information products throughout the territory. In this sense, SmartLand@Pompei is a service that envisages the design and realisation of a portal for the integrated cultural tourist system, through which to network both those operating in the territory, to publicise the initiatives and events aimed at expanding the tourist offer and creating greater involvement of residents, and visitors, to whom a complete framework of the tourist offer and services and the suggested itineraries can be presented in relation to their financial and time resources.</p>	

Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i>	<ul style="list-style-type: none"> Picone R. (ed.), <i>Pompei accessibile. Per una fruizione ampliata del sito archeologico</i>, L'Erma di Bretschneider, Roma 2014. https://www.unesco.it/it/PatrimonioMondiale/Detail/123 http://pompeisites.org/grande-progetto-pompei/ https://www.grandepompei.beniculturali.it https://www.beniculturali.it/ente/grande-progetto-pompei-unita-grande-pompei https://www.teknoring.com/news/progettazione/pompei-per-tutti-3-km-di-percorso-accessibile-dentro-gli-scavi/
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS, <i>Florence Charter</i>, 1981, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_baf8432e213a404dbdedef5171b7df90.pdf.</p> <p>ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i>, 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf.</p> <p>Council of Europe, <i>Convention for the Protection of the Archaeological Heritage of Europe</i>, The Valletta Convention, 1992, https://www.coe.int/en/web/culture-and-heritage/valletta-convention.</p> <p>Council of Europe, <i>European Landscape Convention</i>, 2000, https://rm.coe.int/1680080621.</p> <p>ICOMOS, <i>Salalah Guidelines for the Management of Public Archaeological Sites</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a363f8c4662b.pdf.</p> <p>ICOMOS-IFLA, <i>ICOMOS-IFLA Document on Historic Urban Public Parks</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_35cc0006820a47298626dc214cedb11b.pdf.</p> <p>ICOMOS-IFLA, <i>ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage</i>, 2017, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_cd7200d8a8b04613b4456f230c433a15.pdf.</p>
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>Archaeological sites</p> <p>Ancient constructions</p> <p>Landscape and historical gardens</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	 <p>https://www.grandepompei.beniculturali.it/index.php/valorizzazione-area-archeologica-di-villa-sora-a-torre-del-greco-is-15</p>



<https://www.teknorin g.com/news/progettazione/pompei-per-tutti-3-km-di-percorso-accessibile-dentro-gli-scavi/>



<https://www.grandep ompei.beniculturali.it>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Pompei, Ercolano, Oplontis and surrounding areas
		Address	
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
		Find spot	
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)
		Cities	(if other, add text)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Century Start year End year	Archaeological sites, historical buildings, landscape and
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event Actor Century Start year End year	Post industrial revolution period
	OTHER	Investigation status (select from list)	Un-documented Archived Studied
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology Artisanship Authorship Knowledge/ideas Performance
		Rituals/festivals/folklore/ceremonies	Traditional cults
		Social activities/practices	Agri-food excellence and presidia
		Traditional arts	Arts
		Traditional communication means Traditional construction systems	
		Traditional craftsmanship	Professions
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Old cities

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features Art works Eco-facts Ethnographic Historic replica Utilitarian Written evidences
		Immovable	Carved Frescoes Graffiti Mosaics
		Digital	Art Virtual reality
		Time period (select from list)	Ancient period Post industrial revolution period
		Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event Actor Century Start year End year
	OTHER	Investigation status (select from list)	Un-documented Archived Studied Exhibited

	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_022

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Individual buildings		
	Cities		
	Natural areas		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Bricks	
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels	Painted surfaces	
	Plasters	Plasters	
	Polymeric materials		
	Marbles, travertines, stones and granites	Travertines, stones	
	Vegetable, mineral and animal fibres		
	Wood	Wood	
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Portal		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists Public and private heritage institutions responsible for managing monuments and sites		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	Organisation of events and festivals
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Preventive conservation; Identification of the risks and deterioration patterns; Materials conservation tests; Pre-

		<i>standards, replicable strategies)</i>	consolidation, cleaning, consolidation and protection of CH materials; Maintenance practices; Accessibility
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_022

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation			Skills on taking care of Cultural Heritage materials		
•	•		Diagnostic activities			Skills on taking care of Cultural Heritage materials		
•	•		Identification of the risks and deterioration patterns			Skills on taking care of Cultural Heritage materials		
•	•		Materials conservation tests			Skills on taking care of Cultural Heritage materials		
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultura l Heritag e materi als		
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices			Skills on taking care of Cultural Heritage materials		
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					

•	•	•	Project of restoration					
•			Reconstruction					
	•	•	Adaptive re-use of CH					
	•	•	Accessibility			Skills on implementing measures to encourage people to practice heritage		
		•	Dissemination through publications					
		•	Organisation of events and festivals	Skills on social media				Skills on implementin g measures to encourage people to practice heritage
		•	Encounters with communities					
		•	Educational activities and programmes					
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_023
Best practice ref. <i>identification code (add text)</i>	BP_023	
Object <i>object of the case study (add text)</i>	MALATESTIANA LIBRARY, CESENA, ITALY	
Intervention <i>subject of the case study (add text)</i>	Monitoring and preventive conservation of a library without HVAC systems	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2013
	End date	2013
Actors <i>main actors involved (add text)</i>	University of Bologna	
Description of the best practice <i>Brief abstract (add text)</i>	<p>With reference to the architectural heritage, a relevant aspect concerns the relationship between comfort and preservation. In this regard, microclimatic monitoring should aim firstly at preserving the architecture and the goods, such as collections, guarded inside it, and secondly at ensuring the well-being of its visitors and workers. Often the current introduction of the Heating, Ventilation and Air Conditioning (HVAC) systems, motivated by the achievement of a certain comfort for the users of the asset, is not accompanied by an assessment of the possible side effects of these systems on the building, and it is precisely the modification of the internal microclimatic conditions that can generate a "stress" that was not present in the original building and that affects its conservation. In this sense, the case of the Malatestiana Library in Cesena is exemplary. Here the internal temperature and relative humidity is still regulated through a precise windows opening and the numerical control of the visitors. If this management approach has long been based on the rule of "good sense", the results of the microclimate monitoring campaign carried out in 2013 by the Department of Architecture of the University of Bologna showed how it was precisely the absence of HVAC systems, combined with precise management practices, that ensured an optimal conservation of the ancient library, the wooden plutei and the manuscripts. This does not mean banning the introduction of plant systems in buildings originally without them, but rather highlighting the importance of studying the historic microclimate in order to make choices compatible with heritage conservation. In particular, the monitoring campaign carried out at the Malatestiana Library regarded the measurement of the two most important parameters, able to deteriorate the building, the manuscripts and the plutei: Temperature (T) in °C, and Relative Humidity (RH).</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • Pretelli M., Fabbri K. (eds.), <i>Historic Indoor Microclimate of the Heritage Buildings. A Guideline for Professionals who care for Heritage Buildings</i>, Springer, Cham 2018. • Pretelli M., Fabbri K., <i>Heritage buildings and historic microclimate without HVAC technology: Malatestiana Library in Cesena, Italy</i>, UNESCO Memory of the World, in "Energy and Buildings", 76, 2014, pp. 15-31. • Pretelli M., Fabbri K., Ugolini A., Milan A., <i>Indoor Microclimate effect on heritage buildings: the case study of Malatestiana Library</i>, in Boriani M., Gabaglio R., Gulotta D. (eds.), <i>Built Heritage 2013. Monitoring Conservation Management</i>. Proceedings of the Conference (Milan, 18-20 November 2013), Politecnico di Milano, Centro per la Conservazione e 	



	<p>Valorizzazione dei Beni Culturali, Milano, 2013, pp. 1439-1446.</p> <ul style="list-style-type: none"> • Canali F., <i>Tracce albertiana nella Romagna umanistica tra Rimini e Faenza. L'architettura malatestiana a Cesena (1433-1465): la biblioteca di Malatesta Novello e il problema dei "modelli", "domini", "orizzonti" e "consigli" di Leon Battista Alberti</i>, in Canali F. (ed.), <i>Brunelleschi, Alberti e oltre</i>, Emmebi Edizioni Firenze, Firenze 2010, pp. 81-105. • http://www.unesco.org/new/en/communication-and-information/memory-of-the-world/register/full-list-of-registered-heritage/registered-heritage-page-8/the-malatesta-novello-library/
<p>Documental references (add text)</p>	<p>CH general criteria framework (common framework, documents, CH)</p>
<p>Keywords transversal tags among different fields of research</p>	<p>Ancient constructions Conservation Preservation</p>
<p>Image/s of the best practice nr. 1/3 image/s to identify the type of best practice</p>	<div data-cs="2" data-kind="parent">  </div> <div data-cs="2" data-kind="parent"> <p>Photo: Kristian Fabbri, 2013.</p> </div>
	<div data-cs="2" data-kind="parent">  </div> <div data-cs="2" data-kind="parent"> <p>Photo: Kristian Fabbri, 2013.</p> </div>



Photo:
Kristian Fabbri,
2013.

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Cesena
		Address	Piazza Maurizio Bufalini
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Library	
		Century 16th-21st century	
		Start year 1545	
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event Realisation	
		Actor Matteo Nuti	
		Century 15th-16th century	
		Start year 1450	
		End year 1545	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	Architectural conformation
		Artisanship	
		Authorship	Wanted by Malatesta Novello; possible involvement of Leon Battista Alberti
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
OTHER	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTH ER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	

	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Exhibited
		Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_023

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Ancient library		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Cotto tiles, bricks	
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Iron	
	Paints, varnishes and enamels		
	Plasters	Plasters	
	Polymeric materials		
	Marbles, travertines, stones and granites	Stones	
	Vegetable, mineral and animal fibres		
	Wood	Wood	
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological) Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Probes for monitoring T and RH		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Public and private heritage institutions responsible for managing monuments and sites		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	Preventive conservation; Monitoring
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Preventive conservation; Monitoring; Maintenance practices

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	


Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

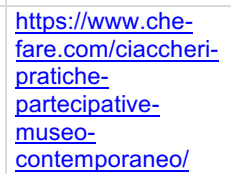
4. SYNTHESIS SHEET

BP_023

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation		Skills on taking care of Cultural Heritage materials	Skills on taking care of Cultural Heritage materials		
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring		Skills on application of new technologies	Skills on application of new technologies		
•	•		Maintenance practices			Skills on taking care of Cultural Heritage materials		
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
	•	•	Adaptive re-use of CH					
	•	•	Accessibility					
		•	Dissemination through publications					
		•	Organisation of events and festivals					
		•	Encounters with communities					
		•	Educational activities and programmes					
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_024
Best practice ref. <i>identification code (add text)</i>	BP_024	
Object <i>object of the case study (add text)</i>	MUBIG, MILAN, ITALY	
Intervention <i>subject of the case study (add text)</i>	Construction of a community museum in a city district	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2020
	End date	Ongoing
Actors <i>main actors involved (add text)</i>	ABCittà, Social Green Way_Stazione Radio Martesana, Pinacoteca di Brera, Gruppo FAS, Greco Positiva, IC Locatelli-Quasimodo, Associação de Antigos Alunos da Universidade de Aveiro	
Description of the best practice <i>Brief abstract (add text)</i>	<p>MUBIG is an open-air museum in the Greco district of Milan, which describes it through permanent and temporary actions. The project aims to offer the city a new decentralised cultural pole, with the intention of enhancing the collective memory, past and present, of a territory through the bottom-up production of significant content of interest to many. In fact, a community museum activates the resources of a territory and encourages the construction of meanings and values around objects and places by the people who identify with them. In the process of building such a museum, all the inhabitants are involved in a participatory and generative process from below, aimed at defining common goods and building and consolidating networks and actions to generate, nurture and support the museum. The aim is to build a new form of welfare in a relational key. MUBIG breaks down the prejudices surrounding the word "museum" by focusing on the methods, approaches and visions for which this institution can be the spokesman, regardless of the physical nature of its spaces. A community museum makes it possible to enhance the socio-cultural and intangible heritage of a place, activates the resources of a territorial community and highlights the links between heritage, human rights and democracy. Specifically, MUBIG is a community museum which involves a diffuse museum (MUBIG develops in the territory and its cornerstones are places which have value for the inhabitants of the neighbourhood, capable of becoming relevant for many more people), a participatory museum (MUBIG is born from below, in fact, people with different skills and experiences, first and foremost residents, collaborate in the production of the museum, coordinated by a group of experts) and a museum of the present (MUBIG tells the present, by listening to a neighbourhood, investigating issues of social relevance and developing proposals capable of responding to current interests and needs). In this sense, MUBIG strengthens the local identity of the Greco district and the sense of belonging of its community; it enhances the ongoing process of urban regeneration and social cohesion; it tells the story and the present; it enhances the material and immaterial dimension; it indicates project lines for the future. MUBIG is a project by ABCittà, in partnership with Social Green Way_Stazione Radio Martesana and with the support of Pinacoteca di Brera, Gruppo FAS, Greco Positiva, IC Locatelli-Quasimodo and Associação de Antigos Alunos da Universidade de Aveiro. MUBIG is winner of the "BANDO 57" of Fondazione di Comunità Milano.</p>	

<p>Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i></p>	<ul style="list-style-type: none"> • https://mubig.it • http://abcitta.org/portfolio/mubig/ • https://www.che-fare.com/ciaccheri-pratiche-partecipative-museo-contemporaneo/
<p>Documental references <i>(add text)</i></p>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>Gubbio Charter</i>, 1960, https://www.italianostra.org/la-carta-di-gubbio-del-1960/.</p> <p>Vv.Aa., <i>Noto Charter</i>, 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf.</p> <p>ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i>, Washington Charter, 1987, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_012ee3b47bea4183b8a7d344d1bcd340.pdf.</p> <p>ICOMOS, <i>The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas</i>, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_b4260164b6a74386a9bc53253775b_b98.pdf.</p> <p>UNESCO, <i>Recommendation on the Historic Urban Landscape</i>, 2011, https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf.</p> <p>Vv.Aa., <i>Urban Agenda for the EU</i>, Pact of Amsterdam, 2016, https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf.</p> <p>UNESCO, <i>The UNESCO Recommendation on the Historic Urban Landscape</i>, 2019, https://whc.unesco.org/en/hul/.</p>
<p>Keywords <i>transversal tags among different fields</i></p> <p>Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i></p>	<p>Urban spaces/assets</p> <p>Valorisation</p> <div>  </div> <p>https://mubig.it/dove/</p>



4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Milan
		Address	Greco district
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
	Type B (of the heritage asset) <i>(select from list)</i>	Open surface	
		Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)
Districts		(if other, add text)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	District	
	Time period (select from list)	Century		
		Start year		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	End year		
		Ancient period		
	Post industrial revolution period			
	OTHER	Investigation status (select from list)	Un-documented	
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Archived	
			Studied	
			Architectural typology	
Artisanship				
Authorship				
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Local socio-cultural heritage			

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
		Mosaics	
	Digital	Art	
		Virtual reality	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event		
	Actor		
	Century		
	Start year		
	End year		
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_024

Type of best practice <i>(select from list)</i>	Conservation			
	Preservation			
	Valorisation			
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Greco district			
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials			
	Ceramic materials			
	Concrete			
	Concrete derivatives			
	Glass materials			
	Metal materials			
	Paints, varnishes and enamels			
	Plasters			
	Polymeric materials			
	Marbles, travertines, stones and granites			
	Vegetable, mineral and animal fibres			
	Wood			
	Wood derivatives			
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
	Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Public and private heritage institutions responsible for managing monuments and sites			
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)		
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)		
	TRANSFERABILITY	(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of		

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities; Creation of partnership and networking

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_024

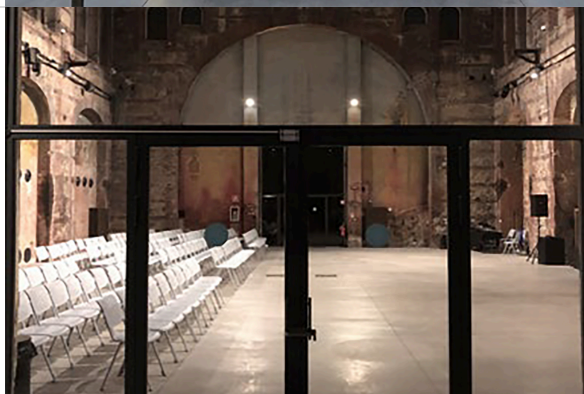
Conservation	Preservation	Valorisation	Activities (select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials					
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction					
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					Skills on implementing measures to encourage people to practice heritage
			• Educational activities and programmes					
			• Creation of partnership and networking					Skills on encouraging and supporting the development of networks
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_025
Best practice ref. <i>identification code (add text)</i>	BP_025	
Object <i>object of the case study (add text)</i>	OFFICINE GRANDI RIPARAZIONI, TURIN, ITALY	
Intervention <i>subject of the case study (add text)</i>	Cultural and creative reuse of industrial heritage	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2014
	End date	2019
Actors <i>main actors involved (add text)</i>	For Engineering Architecture	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The case of Officine Grandi Riparazioni (OGR) in Turin is a virtuous example of reuse and valorisation of industrial heritage triggered by the experimentation of new processes of economic development in which the role and function of culture and creative activities become increasingly crucial in the value chain of local productions. The cultural mechanism of restarting OGR transformed this complex from a train repair factory to a creativity and innovation hotbed. It is in 2008 that the CRT Foundation acquires the complex of OGR from Rete Ferroviaria Italiana. In 2012, the Consortium Company OGR-CRT is born and, in 2013, it bought the OGR with the intention of returning them to the city as a research and innovation hub, a driver of cultural and creative industry. The rebirth of OGR can be found in the materialisation of the link between history, research and innovation. It is an area that develops beyond the building where the intervention has been concentrated (the H-building) which is the oldest pre-existence. The project was entrusted to For Engineering Architecture, a company founded in 2012 by Roberto Mancini, Valeria Sclaverano and Corrado Vaschetti. Construction started in 2014, a first part of the construction site was concluded in 2017, and the last part in 2019. The reinterpretation of the historical material substance has been combined with high technology, flexibility of spaces, accessibility for all and artistic installations. The restoration work seems to take up a line of restoration that envisages the implementation of the principle of minimum intervention. The idea behind the operation was that of a production process that preserves the historical vocation of the complex, while moving from the material side, that of trains, to the immaterial side, that of ideas. The OGR are no longer filled with trains to be repaired, but with citizens who feed a new factory based on the pillars of creativity and innovation, a cultural device that constitutes an entrepreneurial accelerator. The latest development in the OGR timeframe is linked to the compelling initiatives put in place to counter the emergency caused by the spread of COVID-19. As a matter of fact, this centre has been used as a specific health centre with 100 sub-intensive and in-patient treatment places. In 2015, the project won the Urban Prize of Urbanpromo for the category "Quality of infrastructures and public spaces" and, in 2018, as part of the event "Urbanpromo projects for the country", the designers were asked to present the project in the section "Turin and Ivrea: functions of excellence in projects that renew urban quality".</p>	

<p>Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i></p>	<ul style="list-style-type: none"> • Covid-19, alle OGR di Torino 100 posti letto per i malati, https://www.aipaipatrimonioindustriale.com/post/covid-19-alle-ogr-di-torino-cento-posti-letto-per-i-malati. • Ecco il programma arti visive delle nuove OGR di Torino con grandi nomi dell'arte contemporanea, https://www.artribune.com/arti-visive/arte-contemporanea/2017/05/anteprime-programma-arti-visive-2017-2018-nuove-ogr-di-torino-mostre/. • Gibello L., Milan L., Torino, la rinascita delle OGR tra storia e futuro, in "Il Giornale dell'Architettura", 3 October 2017, https://ilgiornaledellarchitettura.com/2017/10/03/torino-la-rinascita-delle-ogr-tra-storia-e-futuro/. • Officine Grandi Riparazioni: fucina di treni e di vite, in "Rivista Museo Torino", Special OGR, January 2011, https://www.museotorino.it/resources/pdf/magazine/flip/ogr/files/assets/common/. • Premio Urbanistica, vincono i progetti delle OGR e di San Salvario, https://urbanpromo.it/2019/premio-urbanistica/le-precedenti-edizioni-del-premio-urbanistica/. • Signorelli L., Mariotti C., Officine Grandi Riparazioni di Torino. Patrimonio industriale come fucina di creatività e innovazione, in "Recupero e Conservazione", 160, 2020, pp. 42-51. • https://ogrtorino.it/project
<p>Documental references <i>(add text)</i></p>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS-TICCIH, <i>The Nizhny Tagil Charter for the Industrial Heritage</i>, 2003, https://www.icomos.org/18thapril/2006/nizhny-tagil-charter-e.pdf.</p> <p>ICOMOS-TICCIH, <i>Joint ICOMOS-TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes</i>, Dublin Principles, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_d251c1dbc22a4210a5d893cf058f8c41.pdf.</p>
<p>Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i></p>	<p>Industrial archaeology assets</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>
<p>Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i></p>	<div> </div> <div> <p>Signorelli L., Mariotti C., <i>op. cit.</i>, p. 45.</p> </div>



Signorelli L., Mariotti C., *op. cit.*, p. 46.



Signorelli L., Mariotti C., *op. cit.*, p. 48.

Signorelli L., Mariotti C.,
op. cit., p. 42.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Turin
		Address	Corso Castelfidardo 22
		Country	Italy
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function	Train repair factory
	Time period (select from list)	Century	19th-20th century
		Start year	1889
		End year	1992
		Ancient period	
		Post industrial revolution period	
		Event	Construction of the H-building
		Actor	
		Century	19th century
		Start year	1884
		End year	1889
		Event	Completion of the entire industrial sector
		Actor	
		Century	19th century
		Start year	1889
End year	1895		
OTHER	Investigation status (select from list)	Un-documented	
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Archived	
		Studied	
		Architectural typology	Industrial Heritage
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
		Immovable	Written evidences
			Carved
			Frescoes
			Graffiti
			Mosaics
			Digital
			Virtual reality

OTHER	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal significant events in the history of the heritage artefact <i>(add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
		Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
	Immaterial aspects connection to immaterial aspects <i>(select from list)</i>	Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_025

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	H-building of Officine Grandi Riparazioni		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick	
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Cast iron, steel	
	Paints, varnishes and enamels		
	Plasters	Plaster	
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of restoration; Adaptive re-

		<i>standards, replicable strategies)</i>	use of CH; Accessibility; Organisation of events and festivals
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities


4. SYNTHESIS SHEET

BP_025

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	
			Activities					
			• • • Historic and bibliographic research					
			• • • Studies on CH					
			• • • Documentation of CH					
			• • • Communication of CH					
			• • Preventive conservation					
			• • Diagnostic activities					
			• • Identification of the risks and deterioration patterns					
			• • Materials conservation tests					
			• • Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
			• • Reinforcement of CH buildings					
			• • Monitoring					
			• • Maintenance practices					
			• • Management and administration practices					
			• • • Promotion and support of interventions for conservation					
			• • • Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)		
			• • Reconstruction					
			• • Adaptive re-use of CH			Skills on organisation and logistics of complex situations (management of means and resources)		
			• • Accessibility			Skills on organisation and logistics of complex situations (management		

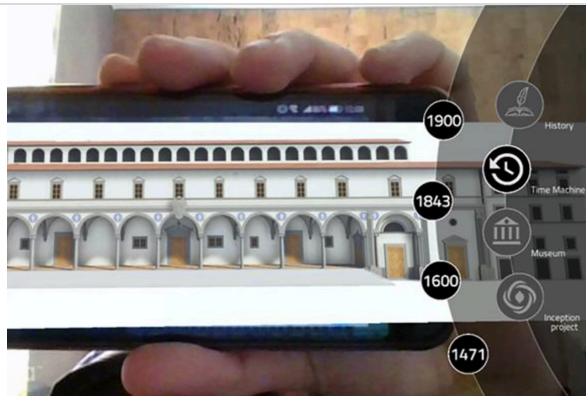
						of means and resources)		
			• Dissemination through publications					
			• Organisation of events and festivals			Skills on encouraging creative industries' involvement in CH domains		
			• Encounters with communities					Skills on encouraging creative industries' involvement in CH domains
			• Educational activities and programmes					
			• Creation of partnership and networking				Skills on encouraging creative industries' involvement in CH domains	
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_026
Best practice ref. <i>identification code (add text)</i>	BP_026	
Object <i>object of the case study (add text)</i>	OSPEDALE DEGLI INNOCENTI, FLORENCE, ITALY	
Intervention <i>subject of the case study (add text)</i>	Physical and digital enhancement of a cultural heritage asset	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2008
	End date	2016
Actors <i>main actors involved (add text)</i>	Ipostudio with Pietro Carlo Pellegrini and Eugenio Vassallo; INCEPTION project (coordinator: University of Ferrara, Italy)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>After an international competition held in 2008 by the Istituto degli Innocenti, a design phase carried out from 2008 to 2011 by Ipostudio with Pietro Carlo Pellegrini and Eugenio Vassallo, and a construction phase from 2012 to 2016, the MUDI - Museo degli Innocenti has been inaugurated. The project for the Nuovo Museo degli Innocenti involved the new public accesses from the square through two metal mechanisms, and concerned the reorganisation of the internal paths, both vertical and horizontal, the refurbishment, the enhancement of temporary and permanent exhibition spaces, and the recovery of the large loggia on the top floor for the construction of a new cafeteria with a view of the monuments of Florence, that can be closed by movable glass panels. In the framework of the project, it has been addressed target users, such as tourists, visitors, cultural heritage asset owners, scholars and professionals. In this regard, INCEPTION project developed a user-based walkthrough which is related to the understanding of the evolution of the building, as a support for restoration or touristic applications. This cultural heritage workflows allows the definition and implementation of what a user can do to retrieve, provide, link, analyse, validate, interpret and use data, and can be performed for tasks such as preservation, site management, and connect tangible and intangible information. Especially, the acquired documentation aimed at the creation of a 3D model, that could allow multimedia visualisations and applications to enhance the new museum and to create innovative ways to explore the artistic and architectonic heritage and new forms of accessibility. By the use of a 3D morphometric survey, it was possible to investigate the complexity of the object using different technologies, such as the 3D laser scanner in order to obtain a 3D database, the topographic survey for geo-referencing of the database, and the photographic survey aimed at the implementation of a comprehensive knowledge of surfaces state of conservation. Moreover, it was highlighted possible uses of the 3D models and information, semantically linked towards applications. Especially, the implementation of the overall documentation and data aggregation for the 3D modelling semantic approach allowed data association among survey data, modelled geometries (parametric modelling) and information enrichment (building evolution, historical analysis, new form of accessibility to the museum). In this way, the project activities have addressed the modelling approach within the 3D semantic H-BIM, aggregating semantic attributes to 3D geometric models to allow new forms of heritage data management. In particular, the semantic part consisted of nomenclature and interpretation of building elements, and integration of additional documents and information related to the history of the building and 3D data capturing.</p>	

	This has been performed by involving the dedicated stakeholder (Istituto degli Innocenti) and the members of the stakeholder panel that supported the consortium in focusing effective strategies to increase use and reuse of digital models.
Bibliography and sitography <i>main sources referred to the best practice</i> (add text)	<ul style="list-style-type: none"> • Mulazzani M. (ed.), <i>L'Ospedale degli Innocenti di Firenze. La fabbrica brunelleschiana dal Quattrocento al Novecento. Il nuovo museo</i>, Electa, Milano 2016. • Terpolilli C., <i>Oltre il Restauro. La valorizzazione del patrimonio edilizio pubblico monumentale. L'Istituto degli Innocenti e il progetto MUDI</i>, in "TECHNE", 2, 2012, pp. 158-171. • https://www.abitare.it/it/architettura/progetti/2016/10/18/ipostudio-spedale-degli-innocenti/ • https://www.aeiprogetti.com/projects/museo-degli-innocenti/ • https://www.themaprogetto.it/il-progetto-del-museo-degli-innocenti-fiorenze/ • https://www.inception-project.eu/en/demonstration_cases/istituto-degli-innocenti-florence-italy • https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5c487bf10&appId=PPGMS • http://www.salonedelrestauro.com/new/admin/upload/incontro/Combine_2.pdf • https://www.abstrartfirenze.org/blog/putti-andrea-della-robbia/
Documental references (add text)	CH general criteria framework (common framework, documents, CH)
Keywords <i>transversal tags among different fields of research</i> (add text)	Ancient constructions Conservation Preservation Valorisation
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	 https://www.aeiprogetti.com/projects/museo-degli-innocenti/




<https://www.aeiprogetti.com/projects/museo-degli-innocenti/>



<https://ec.europa.eu/research/participants/documents/downloadPublic?documentId=080166e5c487bf10&appId=PPGMS>

2. IDENTIFICATION OF THE HERITAGE ASSET

BP_026

Name <i>name by which the heritage asset is known</i> (add text)	Ospedale degli Innocenti
Alternative names (if any) <i>names by which the asset has been known in the past</i> (add text)	Spedale degli Innocenti Istituto degli Innocenti
Designation and Protection (if any) (select from list)	No protection Local listing (a monument, building, urban area or landscape which is listed on a local register for protection) National listing (i.e. a monument, building, urban area or landscape which is listed on a national register for protection) International protection (i.e. UNESCO World Heritage)
Source (if any) <i>the body or information system on which the heritage asset is registered</i> (add text)	—
Reference number (if any) <i>identification of this heritage asset within the information system</i> (add text)	—
Image/s of the CH asset <i>nr. 1/2 image/s to identify the type of CH asset</i> (add image/s and source/s)	 https://www.aeiprogetti.com/projects/museo-degli-innocenti/

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Florence
		Address	Piazza della Santissima Annunziata 12
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Horphanage
		Century	15th-19th century
		Start year	1445
		End year	c. 1875
		Function	Brefotrophy
		Century	19th century
		Start year	c. 1875
		End year	1890
		Function	Museum
		Century	19th-21st century
		Start year	1890
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation
		Actor	Filippo Brunelleschi
		Century	15th century
		Start year	1419
		End year	1427
		Event	Continuation of the construction work
		Actor	Francesco della Luna
		Century	15th century
		Start year	1436
		End year	1445
		Event	Restoration
		Actor	Leopoldo Pasqui
		Century	19th century
		Start year	1845
		End year	1845
		Event	Addition of an attic on the Renaissance façade
		Actor	Luigi Fusi
		Century	19th century
		Start year	1895
		End year	1895
		Event	Restoration
		Actor	Design by architects Rodolfo Raspollini, Domenico Cardini and Guido Morozzi, and construction supervision by architect Domenico Cardini and engineer Mario Focacci
		Century	20th century
		Start year	1966
		End year	1970
		Event	Restoration of the front on the square including the loggia
		Actor	
		Century	20th century
		Start year	1994
		End year	1994
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	

	Immaterial aspects <i>connection to immaterial aspects (select from list) (add text)</i>	Architectural typology	
		Artisanship	
		Authorship	Filippo Brunelleschi
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Renaissance milestone

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
	Temporal significant events in the history of the heritage artefact (add text)	Post industrial revolution period	
		Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects (select from list)	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_026

Type of best practice <i>(select from list)</i>	Conservation Preservation Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Hospital		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials Ceramic materials Concrete Concrete derivatives Glass materials Metal materials Paints, varnishes and enamels Plasters Polymeric materials Marbles, travertines, stones and granites Vegetable, mineral and animal fibres Wood Wood derivatives	 Ceramic, terracotta, brick Glass Metal Plaster Stone Wood	
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological) Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	3D model 3D laser scanner 3D database		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Professional researchers Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES TRANSFERABILITY	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i> <i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i> <i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and</i>	Documentation of CH; Communication of CH; Educational activities and programmes Project of restoration; Creation of partnership and networking

		<i>storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Communication of CH
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_026

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH	Skills on developing knowledge banks on Cultural Heritage materials, techniques and know- how				
•	•	•	Communication of CH	Skills on digitalisati on			Skills on mapping and analysis of users' needs and requiremen ts	
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration			Skills on organisatio n and logistics of complex situations (managem ent of means and resources)		

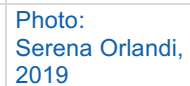
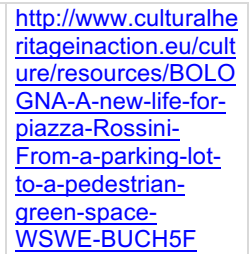
•		Reconstruction					
	•	Adaptive re-use of CH					
	•	Accessibility					
		Dissemination through publications					
		Organisation of events and festivals					
		Encounters with communities					Skills on training and educational activities
		Educational programmes and activities	Skills on training and educational activities				
		Creation of partnership and networking			Skills on encouraging and supporting the development of networks		
		Advertisements with CH					
		Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_027
Best practice ref. <i>identification code (add text)</i>	BP_027	
Object <i>object of the case study (add text)</i>	PIAZZA ROSSINI, BOLOGNA, ITALY	
Intervention <i>subject of the case study (add text)</i>	Participated and green valorisation of cultural urban spaces	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2017
	End date	2020
Actors <i>main actors involved (add text)</i>	ROCK project (Municipality of Bologna, Foundation for Urban Innovation, Architecture Department of the University of Bologna), Bologna Design Week, Unipolis Foundation	
Description of the best practice <i>Brief abstract (add text)</i>	<p>To solve conflicting issues, regenerate the urban fabric and strengthen the identity of the area, the city of Bologna, within the framework of the ROCK project, launched Five Squares, a six-day event to reconnect open public spaces and give them back to citizens in a shared and participatory process. One of these spaces is Piazza Rossini, a public space of great historical and architectural value, which was transformed into a parking lot decades ago, in the middle of the university historical area. Using participatory methods, listening to the wishes of citizens and co-designing with students, the municipality, its urban agency (Foundation for Urban Innovation) and the University of Bologna installed a green carpet in the middle of the square instead of cars, a temporary installation conceived and designed with students. In particular, the idea of redesigning Piazza Rossini was born during the participatory laboratory "U-Lab" implemented in the university area, which was attended by over 250 people and from which emerged the need to restore a social dimension to the square, revalorise it and its surroundings, enhancing the collaboration of all the local actors (institutions, associations, students, etc.), while paying particular attention to greening and lighting as design elements. In this way, inhabitants can now experiment with new uses and rediscover and appreciate the details of the architectural treasures overlooking the square. Additionally, as heat waves in Bologna are increasingly frequent and the city must adapt to present and future changes in the climate, the transformation of Piazza Rossini is a symbolic and demonstrative action to change behaviour and reduce temperatures in urban spaces. A large ecosystem of stakeholders has been involved in the whole project: from the listening and co-design phases within U-Lab, to the experimentation on Piazza Rossini and the whole university area. The transferability of these actions regards, in particular: the use of cultural heritage as an engine to work towards a common urban regeneration and development vision, involving citizens; the engage in active and serious listening in a cooperative manner; the organisation of communication campaigns to promote local heritage; the demonstration of the willingness to listen to citizens and to reflect their needs (e.g. the approval of Bologna's municipal board to turn Piazza Rossini into a permanent pedestrian space). The temporary experiment and transformation of Piazza Rossini was largely embraced, with an average daily presence of over 27,000 and a peak of 36,000 visitors, monitored through crowd analysis sensors. People did not just go through the area but spent time in the square, and a large number of locals, local associations and social entrepreneurs endorsed the initiative as a first step towards a future vision and action for the city. This rapidly led to the</p>	

	decision from the municipal board to turn the temporary action into a permanent solution for the pedestrianisation of this space.
Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i>	<ul style="list-style-type: none"> Boeri A., Longo D., Gianfrate V., Turillazzi B., Roversi R., Massari M., <i>Inclusive Historical Centres: the Experience of the EU ROCK Project in Bologna</i>, in <i>Accessibility in architectural heritage: Approaches and experiences between technology and restoration</i>, Anteferma Edizioni srl, Conegliano (TV) 2021, pp. 118 - 127. Leoni G., Boeri A., Longo D., Gianfrate V., Boulanger S.O.M., Massari M., Roversi R. (eds.), <i>Cultural Heritage Leading Urban Futures. Actions and Innovations from ROCK Project</i>, CPCL Series, 2020. Roversi R., Longo D., Massari M., Orlandi S., Turillazzi B., <i>Cultural heritage as activator of circular urban dynamic</i>, in "TECHNE", 22, 2021, pp. 218 - 226. https://bologna.rockproject.eu/rock-sperimenta-e-piazza-rossini-diventa-pedonale/ http://www.culturalheritageinaction.eu/culture/resources/BOLOGNA-A-new-life-for-piazza-Rossini-From-a-parking-lot-to-a-pedestrian-green-space-WSWE-BUCH5F
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>Gubbio Charter</i>, 1960, https://www.italianostra.org/la-carta-di-gubbio-del-1960/.</p> <p>Vv.Aa., <i>Noto Charter</i>, 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf.</p> <p>ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i>, Washington Charter, 1987, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_012ee3b47bea4183b8a7d344d1bcd340.pdf.</p> <p>ICOMOS, <i>The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas</i>, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_b4260164b6a74386a9bc53253775bb98.pdf.</p> <p>UNESCO, <i>Recommendation on the Historic Urban Landscape</i>, 2011, https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf.</p> <p>Vv.Aa., <i>Urban Agenda for the EU</i>, Pact of Amsterdam, 2016, https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf.</p> <p>UNESCO, <i>The UNESCO Recommendation on the Historic Urban Landscape</i>, 2019, https://whc.unesco.org/en/hul/.</p>
Keywords <i>transversal tags among different fields</i>	<p>Urban spaces/assets</p> <p>Valorisation</p>

4CH COMPETENCE
CENTRE FOR THE
CONSERVATION OF
CULTURAL HERITAGE

nr. 1/3 image/s to identify the type of best practice



Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Bologna
		Address	Piazza Rossini
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Churchyard
		Century	until 19th century
		Start year	
		End year	1801
		Function	Square
		Century	19th-21st century
		Start year	1801
		End year	
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Post industrial revolution period	
		Event	Use as churchyard of San Giacomo Maggiore Church
		Actor	
		Century	until 19th century
Start year			
End year		1801	
Event		Opening to the public passage under the name of Piazza San Giacomo	
Actor			
Century		19th century	
Start year		1801	
End year		1868	
Event		Dedication of the square to Giacomo Rossini	
Actor			
Century	19th-21st century		
Start year	1868		
End year			
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	Square as place of social activities and practices
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
THE HERITAGE ARTEFACT (the main)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian

OTHER			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> <i>(add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
		Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_027

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Square		
	Surrounding heritage buildings		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Crowd analysis sensors		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Public and private heritage institutions responsible for managing monuments and sites		
	Companies from the creative industry producing heritage-based content, apps, games, education and tourism services		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	Adaptive re-use of CH; Accessibility
	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition,</i>	Adaptive re-use of CH; Accessibility

		<i>management and storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Communication of CH; Adaptive re-use of CH; Organisation of events and festivals; Encounters with communities; Creation of partnership and networking

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

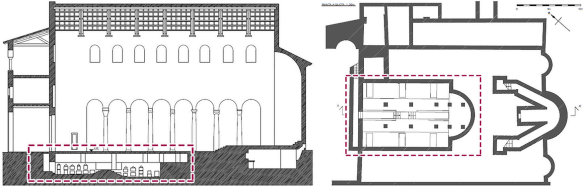
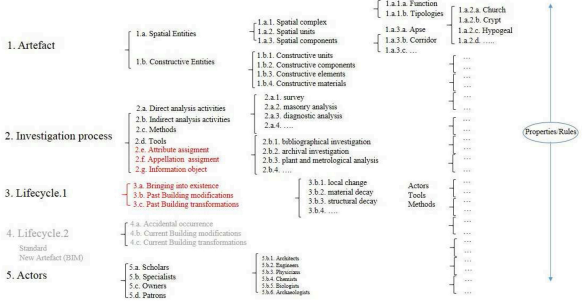
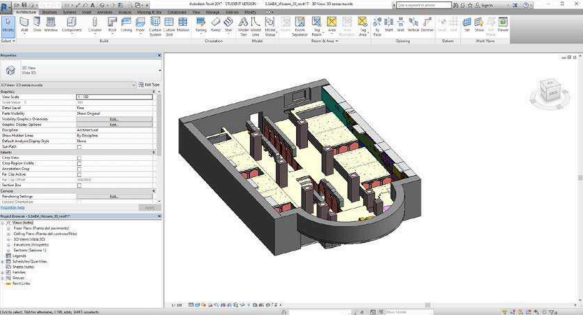
4. SYNTHESIS SHEET

BP_027

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					Skills on social media
•	•	•	Preventive conservation					
•	•	•	Diagnostic activities					
•	•	•	Identification of the risks and deterioration patterns					
•	•	•	Materials conservation tests					
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•	•	Reinforcement of CH buildings					
•	•	•	Monitoring					
•	•	•	Maintenance practices					
•	•	•	Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•	•	•	Reconstruction					
	•	•	Adaptive re-use of CH		Skills on sustainable management of Cultural Heritage	Skills on sustainable management of Cultural Heritage		Skills on implementing measures to encourage people to practice heritage
	•	•	Accessibility		Skills on application of new technologies	Skills on sustainable management of Cultural Heritage		
		•	Dissemination through publications					
		•	Organisation of events and festivals					Skills on implementing measures to encourage people to practice heritage
		•	Encounters with communities					Skills on implementing

							measures to encourage people to practice heritage
			• Educational activities and programmes				
			• Creation of partnership and networking			Skills on encouraging and supporting the development of networks	Skills on encouraging and supporting the development of networks
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_028
Best practice ref. <i>identification code (add text)</i>	BP_028	
Object <i>object of the case study (add text)</i>	SAN SABA ORATORY, ROME, ITALY	
Intervention <i>subject of the case study (add text)</i>	Ontology and Built Heritage Information Modelling/Management of a historical architectural heritage	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2010
	End date	2011
Actors <i>main actors involved (add text)</i>	Sapienza University of Rome	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Once located in the middle of the countryside, the San Saba Oratory is a case study treated by the Unit of Sapienza University of Rome in the framework of the PRIN 2010-2011 funding, obtained from the project BHIMM - Built Heritage Information Modelling/Management. The choice was to focus the research on BIM in relation to the existing historical architecture. The application of BIM to the historical architectural heritage involves the use of rather generalist semantic tools that lead to uncertain results in the characterisation of the existing building, in terms of both the fidelity of the geometric representation and the organisation of the information data. The concrete application of BIM to an existing reality forces in fact to a heavy limitation of the knowledge data that can be accumulated in a traditional way, and to a certain vagueness of representation. The case of the San Saba Oratory in Rome offered the experimental opportunity to try to find a way to reconcile precision and certainty through the integration of two tools of semantic representation of the existing heritage: Ontology and BIM. An Ontology was thus defined, while at the same time ensuring the possibility of establishing relationships between the databases of this and the current BIM systems. The development of an appropriate and open Ontology, and the definition of a way of linking it with programmes in the BIM environment, constituted the main objective in the development of the work produced, which has been named (O)BHIMM - Ontology for Built Heritage Information Modelling/Management. The operative contents of the work carried out can be traced back to three fundamental steps: elaboration of an ontology suitable for the representation of the existing through the modelling of domains; creation of a BIM model relative to the San Saba Oratory; design of an interface between Ontology and BIM system. This corresponded to the realisation of a "bridge" programme between an Ontology editor programme, such as Protégé, and a BIM modelling programme, such as Revit.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • Acierio M., Cursi S., Simeone D., Fiorani D., <i>Architectural heritage knowledge modelling: An ontology-based framework for conservation process</i>, in "Journal of Cultural Heritage", 24, 2017, pp. 124-133. • Fiorani D., <i>La modellazione della conoscenza nel restauro: uno sviluppo per il BHIMM. Problematiche generali e il caso-studio di San Saba in Roma</i>, in Della Torre S. (ed.), <i>Built Heritage Information Modelling/Management BHIMM</i>, Edizioni IMREADY, Galazzano 2017, pp. 1-12. • Rechichi F., <i>Definizione e implementazione di un modello informativo per</i> 	

	<p><i>i beni culturali</i>, Tesi di Dottorato in Ingegneria Civile e Architettura, Università degli Studi di Parma, Ciclo XXXIII, Coordinatore Prof. Longo S., Relatore Prof. Roncella R., Tutor Prof. Fassi F., 2020.</p> <ul style="list-style-type: none"> Saulli T., Wahbeh W., Nardinocchi C., <i>3D survey and digital models as the first documentation of hypogeum of S. Saba in Rome</i>, in "Applied Geomatics", October 2018, pp. 1-8. https://sansaba.gesuiti.it/basilica-storia-arte/
Documental references (add text)	CH general criteria framework (common framework, documents, CH)
Keywords transversal tags among different fields of research (add text)	Ancient constructions Conservation Preservation Valorisation
Image/s of the best practice nr. 1/3 image/s to identify the type of best practice	<div> Saulli T., Wahbeh W., Nardinocchi C., <i>op. cit.</i>, p. 2. </div> <div>  </div> <div>  </div> <div> Fiorani D., <i>op. cit.</i>, p. 9. </div> <div>  </div> <div> Fiorani D., <i>op. cit.</i>, p. 10. </div>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Rome
		Address	Piazza Gian Lorenzo Bernini 20
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
	Location <i>(select from list)</i>	Natural	
		On ground	
		Underwater/maritime	
		Underground	
		Cave	
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
Watermanagement systems	(canals, dams, irrigation, etc.)		

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Century Start year End year	Oratory 8th century	
	Time period (select from list)	Ancient period		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Post industrial revolution period		
		Event	Realisation	
		Actor		
		Century	8th century	
		Start year End year		
	OTHER	Investigation status (select from list)	Un-documented Archived	
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Studied	
			Architectural typology	
Artisanship				
Authorship				
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			Sacred value	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
	Digital	Mosaics	
		Art	
		Virtual reality	
	Time period (select from list)	Ancient period Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
Actor			
Century			
Start year			
End year			
OTHER	Investigation status (select from list)	Un-documented Archived Studied Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_028

Type of best practice <i>(select from list)</i>	Conservation
	Preservation
	Valorisation

Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Oratory
	Hypogeum

Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	Bricks
	Concrete	
	Concrete derivatives	
	Glass materials	
	Metal materials	
	Paints, varnishes and enamels	Painted surfaces
	Plasters	Plasters
	Polymeric materials	
	Marbles, travertines, stones and granites	Stone
	Vegetable, mineral and animal fibres	
	Wood	Wood
	Wood derivatives	

Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)
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Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	BIM modelling programme Ontology editor programme
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Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration
--	--

Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Historic and bibliographic research; Studies on CH; Documentation of CH; Communication of CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data)</i>	

		<i>acquisition, management and storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	


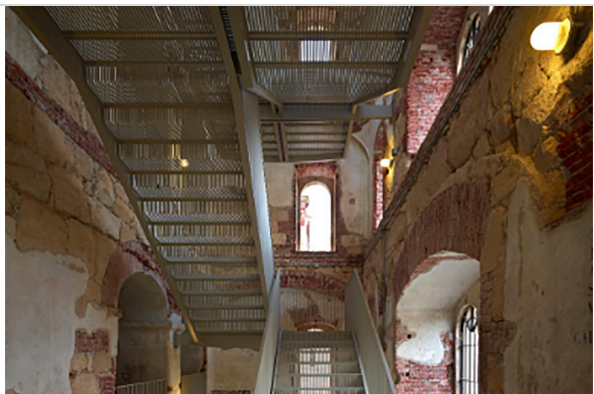
Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_028

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research	Skills on developing knowledge banks on Cultural Heritage materials, techniques and know-how				
•	•	•	Studies on CH	Skills on developing knowledge banks on Cultural Heritage materials, techniques and know-how				
•	•	•	Documentation of CH	Skills on developing knowledge banks on Cultural Heritage materials, techniques and know-how				
•	•	•	Communication of CH	Skills on digitalisation				
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
•	•		Adaptive re-use of CH					
•	•		Accessibility					
		•	Dissemination through publications					
		•	Organisation of events and festivals					
		•	Encounters with communities					
		•	Educational activities and programmes					
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_029
Best practice ref. <i>identification code (add text)</i>	BP_029	
Object <i>object of the case study (add text)</i>	SANTA MARTA BARRACKS, VERONA, ITALY	
Intervention <i>subject of the case study (add text)</i>	Sustainable adaptive re-use of a military complex	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2009
	End date	2015
Actors <i>main actors involved (add text)</i>	ISP - IUAV Studi & Progetti	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The key to this project to restore the former military bakery at the Santa Marta Barracks in Verona, with strong structural density and considerable volumetric complexity, was the definition of a new layout strategy in the imposing Provianda factory, consisting of the bakery warehouse and two grain storage silos. The University of Verona entrusted the design to ISP - IUAV Studi & Progetti, the Venetian university's technical department, which relied on the scientific advice of its professors in the various specialist disciplines, including Massimo Carmassi, who was teaching in the lagoon at the time. The new arrangement responds to the needs of the new function designed as pole of the University of Verona, while maintaining and enhancing the spaces and materials of the building. The new function for the former bakery as new headquarters of the Faculty of Economics of the University of Verona includes classrooms, spaces for teachers and a library. The three courtyards have been lowered to the basement level and closed with steel and glass vaults with lowered arches. The reconnection of horizontal and vertical routes has been achieved with the introduction of walkways and metal staircases, including safety stairs. A complex set of plant systems has been installed. The internal partitions are almost always glazed, aiming to favour the reading of space. Great attention has also been paid to the conservation of materials. In particular, it was Cooperativa Archeologia's technicians who carried out the interventions for the conservation of the external facades and the internal finishing works. In addition, energy saving and renewable energy measures were carried out. As a matter of fact, the project was also characterised by the objective of taking care of the aspects related to the containment of energy consumption. Noting the difficulty of connecting to the city's district heating network, it was decided to build a geothermal plant with heat pumps instead of conventional thermal power plants. The opportunity offered by renewable energies and the physical and geological characteristics of the site led to the feasibility assessment of the geothermal plant for the production of hot and cold thermal fluid, for heating and cooling. The various stages in the restoration of the former bakery include architectural surveys and documentation on the status quo; drawings (plans, cross-sections, axonometric projections and details), a description of all the work phases and, finally, a comprehensive photographic record of the project. In 2015 the work won the Gold Medal for Italian Architecture by the Triennale.</p>	

<p>Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i></p>	<ul style="list-style-type: none"> • Mulazzani M., <i>L'architettura di Massimo Carmassi. La nuova sede dell'Università di Verona: restauro e riuso</i>, Electa, Milano 2016. • https://ilgiornaledellarchitettura.com/2016/01/05/verona-dietro-il-recupero-del-panificio-ce-di-piu/ • http://recuperoeconservazione.it/2016/07/12/il-progetto-di-riuso-dell'ex-panificio-militare-di-verona-oggi-polo-universitario/ • https://divisare.com/projects/305952-carmassi-studio-di-architettura-restauro-del-panificio-della-caserma-santa-marta • https://www.archeologia.it/2015/12/panificio-della-caserma-santa-marta-a-verona-il-restauro-di-cooperativa-archeologia/ • https://www.univr.it/it/santa-marta • https://www.univrmagazine.it/2015/12/03/l'intervento-di-recupero-dell'ex-panificio-santa-marta/
<p>Documental references <i>(add text)</i></p>	<p>CH general criteria framework (common framework, documents, CH)</p>
<p>Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i></p>	<p>Post industrial revolution architecture Conservation Preservation Valorisation</p>
<p>Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i></p>	<div data-kind="parent" data-rs="2"> <div>  </div> <div> <p>https://ilgiornaledellarchitettura.com/2016/01/05/verona-dietro-il-recupero-del-panificio-ce-di-piu/</p> </div> </div> <div>  </div> <div> <p>https://ilgiornaledellarchitettura.com/2016/01/05/verona-dietro-il-recupero-del-panificio-ce-di-piu/</p> </div>

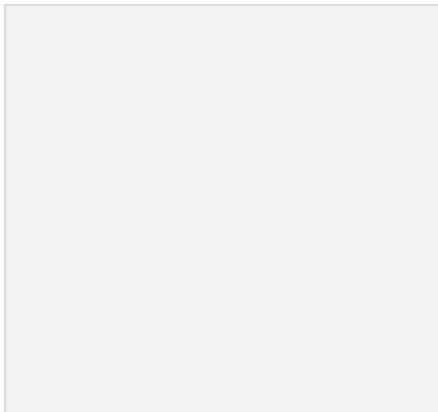


Foto: G. Favaretto,
2016.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Verona
		Address	Via dell'Artigliere 8
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Barracks
	Time period (select from list)	Century 19th-20th century
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year 1865
		End year 1990s
		Ancient period
		Post industrial revolution period
		Event Realisation
		Actor Austrian military engineering
		Century 19th century
		Start year 1863
		End year 1865
OTHER	Investigation status (select from list)	Un-documented
		Archived
		Studied
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology 19th century barracks
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Post industrial revolution period	
		Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_029

Type of best practice <i>(select from list)</i>	Conservation
	Preservation
	Valorisation

Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Bakery warehouse
	Grain storage silos

Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	Brick
	Concrete	Reinforced concrete
	Concrete derivatives	
	Glass materials	Glass
	Metal materials	Steel
	Paints, varnishes and enamels	
	Plasters	Plaster
	Polymeric materials	
	Marbles, travertines, stones and granites	Stone
	Vegetable, mineral and animal fibres	
	Wood	Wood
	Wood derivatives	

Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)
	Anthropic risks (heritage management)

Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—
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Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration
--	--

Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	Adaptive re-use of CH
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of

		<i>storage, catalogue of standards, replicable strategies)</i>	restoration; Adaptive re-use of CH; Accessibility; Dissemination through publications
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities


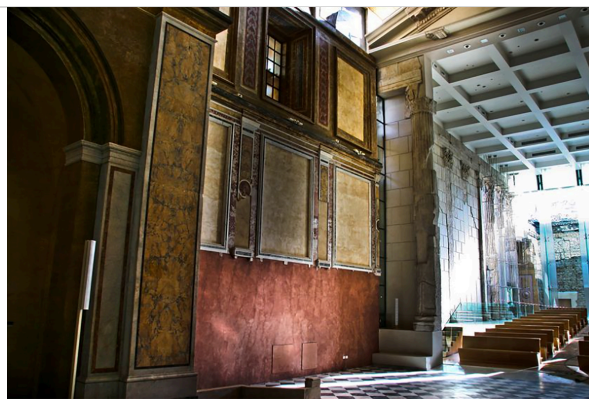
4. SYNTHESIS SHEET

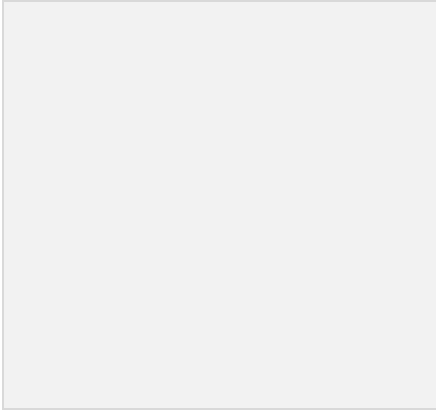
BP_029

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)		
•			Reconstruction					
	•	•	Adaptive re-use of CH		Skills on achievement of environmental challenges and objectives	Skills on organisation and logistics of complex situations (management of means and resources)		
	•	•	Accessibility			Skills on organisation and logistics of complex situations (management of means and resources)		
		•	Dissemination through publications			Skills on training and educational activities		
		•	Organisation of events and festivals					

		• Encounters with communities					
		• Educational activities and programmes					
		• Creation of partnership and networking					
		• Advertisements with CH					
		• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_030
Best practice ref. <i>identification code (add text)</i>	BP_030	
Object <i>object of the case study (add text)</i>	TEMPLE CATHEDRAL, POZZUOLI, ITALY	
Intervention <i>subject of the case study (add text)</i>	Ancient and New in a stratified cathedral	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2004
	End date	2009
Actors <i>main actors involved (add text)</i>	Marco Dezzi Bardeschi (group leader), Gnosis Architettura (Francesco Buonfantino, Antonio De Martino, Rossella Traversari), Alessandro Castagnaro, Renato De Fusco, Laura Gioeni	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The remains of the Roman temple built by Emperor Augustus, and then integrated within the Late-Baroque church-cathedral, were suddenly rediscovered in the aftermath of the tragic fire which in 1967 consistently ravaged the cathedral. On such remains has been initiated a project of partial anastilosys, carried out by one among the most known Italian museum designer (Ezio de Felice), interrupted, leaving the cathedral threatened by looting, while the archaeological remains were chaotically spread around. The project carried out in the 21st century, reconfirming the function of church for the stratified building, puts together, one close to the other, in comparison such diachronic heritage constituting the building. It obtains in the cella and in the entrance of the temple the unique hall of the new cathedral and re-gains to the cathedral the Late-Baroque liturgical spaces of the Presbytery, the Holy of Holy's Chapel, the Chapter and the Sacristy. The ancient pronaos hence became the open-air entrance leading to the unique nave of the church, while the spaces between the columns has been closed with high thin walls of structural glass. The floor of the temple has been brought back to the original level and is reconnected to the space of the transept and the altar, the latter looking to the entrance, through an oblique plan giving onto the altar's space and obtained excavating the hall. This solution in turn allows to enhance the space between the nave, where the remains of the podio belonging to the Roman perios building, identified with the Capitolium of the Roman colony founded in 194 B.C., are still conserved. As second result, it gains additional space to the archaeological visit. The ancient sacristy, equipped with a new internal stair, assumes the role of bridging element in the museum itinerary. The large chapel roofed by a majolica dome, is now turned in the baptistery and its centre is occupied by the baptism basin. Particular efforts have been put in designing the new bell tower, to host the three ancient bronze bells which remain from the ancient tower, built in 1633 and destroyed in 1968. Its new location in the apsidal area, where the stair looking the Chapter hall is conserved, gives to it the required visibility from the lower town. In the solution presented to the international competition the bell tower has been covered by a transparent roof which reproduces, as homage to the arrival in Pozzuoli of Saint Paul, who then consecrated the temple as church, the position of the stars in the sky at that specific propitious time. The intervention was extended to the Roman context beneath the Church with the archaeological paths, the archaeological museum and the lapidarium museum of the town. The project has been selected by the International Award "Domus Restoration and Conservation Fassa Bortolo".</p>	

<p>Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i></p>	<ul style="list-style-type: none"> • Pergoli Campanelli A., <i>Il restauro del Tempio-Duomo di Pozzuoli</i>, in "L'Architetto italiano", 35-36, 2010, pp. 8-13. • Pergoli Campanelli A., <i>Tempio-cattedrale a Pozzuoli</i>, in "AR", 60, 2005, pp. 8-37. • <i>Pozzuoli: l'esito del concorso per il recupero del Tempio-Duomo del Rione Terra</i>, in "ANANKE", 43, 2004, pp. 50-69. • https://ilgiornaledellarchitettura.com/2014/05/08/dopo-50-anni-rieco-il-tempio-duomo-di-pozzuoli/ • https://www.gnosisarchitettura.it/it/progetto/175/tempio-duomo • https://www.premiorestauro.it/documents/69803/94322/Dezzi+Bardeschi_.pdf/a9838858-e6d5-4c88-972a-2b249ad3273c
<p>Documental references <i>(add text)</i></p>	<p>CH general criteria framework (common framework, documents, CH)</p>
<p>Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i></p>	<p>Ancient constructions Conservation Preservation Valorisation</p>
<p>Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i></p>	<div>  </div> <div> <p>https://www.premiorestauro.it/documents/69803/94322/Dezzi+Bardeschi_.pdf/a9838858-e6d5-4c88-972a-2b249ad3273c</p> </div> <div>  </div> <div> <p>https://www.gnosisarchitettura.it/it/progetto/175/tempio-duomo</p> </div>



<https://www.ilcommercioedile.it/terreal-laterizi-per-il-campanile-del-duomo-di-pozzuoli/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Pozzuoli
		Address	Rione Terra
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Temple Cathedral		
		Century Augustan period-21st century		
		Start year		
		End year		
	Time period (select from list)	Ancient period		
		Post industrial revolution period		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation	
		Actor	Lucio Cocceio Aucto	
		Century	Augustan period	
		Start year		
		End year		
		Event	Construction of the tower	
		Actor		
		Century	17th century	
		Start year	1633	
		End year	1633	
		Event	Integration within the Late-Baroque church-cathedral	
		Actor	Bartolomeo Picchiatti	
		Century	17th century	
		Start year	1636	
End year	1647			
Event	Fire			
Actor				
Century	20th century			
Start year	1967			
End year	1967			
	Event	Intervention		
	Actor	Ezio de Felice		
	Century	20th century		
	Start year	1968		
	End year	1972		
OTHER	Investigation status (select from list)	Un-documented		
		Archived		
		Studied		
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology		
		Artisanship		
		Authorship		
		Knowledge/ideas		
		Performance		
		Rituals/festivals/folklore/ceremonies		
		Social activities/practices		
		Traditional arts		
		Traditional communication means		
		Traditional construction systems		
		Traditional craftsmanship		
	Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Sacred value		

Cultural Heritage Type		
ARTEFACTS (particular consideration for, if relevant)		
☐ ☒ ☑	Type	Movable Architectonic features

OTHER	(of the artefact asset) <i>(select from list)</i>		Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact (add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_030

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Temple Cathedral		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick	
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Steel	
	Paints, varnishes and enamels	Painted surfaces	
	Plasters	Plaster	
	Polymeric materials		
	Marbles, travertines, stones and granites	Marble, Stone	
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (disasters and biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of restoration

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_030

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials	
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)			BP_031
Best practice ref. <i>identification code (add text)</i>		BP_031	
Object <i>object of the case study (add text)</i>		TREVI FOUNTAIN, ROME, ITALY	
Intervention <i>subject of the case study (add text)</i>		Valorisation of cultural heritage through fashion shows	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century	
	Start date	2015	
	End date	2016	
Actors <i>main actors involved (add text)</i>		Fendi	
Description of the best practice <i>Brief abstract (add text)</i>		<p>After financing the preservation works for the Trevi Fountain in 2015, Fendi chose this place to celebrate its 90th anniversary. In 2016, in fact, the baroque marbles of the Trevi Fountain, an icon of Rome and one of the most symbolic places in the city, were the protagonists of Fendi's "Legends and Fairy Tales" fashion show event for the inauguration of the fountain after the preservation works. The models walked on a transparent plexiglass catwalk, giving the impression of walking on water. Recognised as one of the most spectacular shows in the history of fashion, this event was also an opportunity to enhance this cultural heritage asset. On the one hand, this shows how sometimes patronage, when it decides to make money available for a specific project, can direct public choices in terms of protection. On the other hand, it shows how sponsorship directly requires visibility, more or less overt, during and after the project, both at the construction site level and at the level of communication around the project itself, up to events that transform, albeit temporarily, the asset whose preservation they have financed.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>		<ul style="list-style-type: none"> Schneider K., <i>Progetto e patrimonio culturale: riflessioni su una visione integrata</i>, in Musso S.F., Pretelli M. (coords.), <i>Restauro: Conoscenza, Progetto, Cantiere, Gestione. Sezione 0: Premessa e Apparati di un lavoro condiviso</i>, Quasar, Roma 2020, pp. 53-57. https://www.elle.com/it/moda/ultime-notizie/news/g1366111/fendi-fontana-di-trevi/ https://www.ilpost.it/2016/07/08/sfilata-fendi-fontana-trevi-roma/ https://artemagazine.it/2016/07/08/la-fontana-di-trevi-scenario-spettacolare-per-la-sfilata-di-fendi-video/ https://st.ilsole24ore.com/art/moda/2016-07-01/fendi-il-90-anni-sfilata-fontana-trevi--150346.shtml?uid=ADjVYgm&refresh_ce=1 https://whc.unesco.org/en/list/91/ 	
Documental references <i>(add text)</i>		<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>Gubbio Charter</i>, 1960, https://www.italianostra.org/la-carta-di-gubbio-del-1960/.</p> <p>Vv.Aa., <i>Noto Charter</i>, 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf.</p> <p>ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i>, Washington Charter, 1987, https://5129c385-3847-464f-90f1-</p>	

Keywords
transversal tags among different fields

Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice



<https://www.elle.com/it/moda/ultime-notizie/news/q136611/fendi-fontana-di-trevi/>

A large, ornate fountain at night, illuminated with green and yellow lights, set against a backdrop of a grand classical building with statues and columns. The fountain features a central figure and multiple tiers of water, with people standing in the pool in the foreground.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Rome
		Address	Piazza di Trevi
		Country	Italy
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	
Fountains	(if other, add text)		

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Century Start year End year	Fountain 18th-21st century 1762
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Post industrial revolution period	
		Event	Construction
		Actor	Nicola Salvi, Pietro e Virginio Bracci
		Century	18th century
		Start year	1732
		End year	1762
	OTHER	Investigation status (select from list)	Un-documented Archived Studied
		Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology
			Artisanship
			Authorship
			Knowledge/ideas
			Performance
			Rituals/festivals/folklore/ceremonies
			Social activities/practices
			Traditional arts
			Traditional communication means
			Traditional construction systems
		Traditional craftsmanship	Ancient craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_031

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Fountain		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	—	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	Creation of partnership and networking; Advertisements with CH
	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Creation of partnership and networking; Advertisements with CH

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	


Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

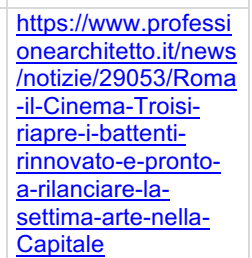
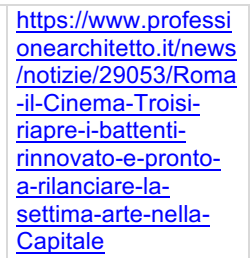
4. SYNTHESIS SHEET

BP_031

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•		Reinforcement of CH buildings					
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
		•	Adaptive re-use of CH					
		•	Accessibility					
			Dissemination through publications					
			Organisation of events and festivals					
			Encounters with communities					
			Educational activities and programmes					
			Creation of partnership and networking		Skills on encouraging and supporting the development of networks	Skills on encouraging and supporting the development of networks		
		•	Advertisements with CH		Skills on implementing measures to encourage people to practice heritage	Skills on implementing measures to encourage people to practice heritage		
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_032
Best practice ref. <i>identification code (add text)</i>	BP_032	
Object <i>object of the case study (add text)</i>	TROISI CINEMA, ROME, ITALY	
Intervention <i>subject of the case study (add text)</i>	Inclusive rehabilitation of a 20th century architecture	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2019
	End date	2021
Actors <i>main actors involved (add text)</i>	Arch. Raffaella Moscaggiuri, Arch. Claudia Tombini	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The intervention carried out at the Cinema Toisi in Rome is part of an urban regeneration operation, supported by funds from the Italian Ministry of Culture included in the "Extraordinary plan for the development of the cinema and multifunctional halls circuit" which granted the management, through a public tender, to the Piccolo America Association. The project imagined this cinema hall as a reference point and an inclusive square in people's social lives: it was conceived as a cinema that is always enlightened and open, even when the projector is turned off. The aim was to create also a study room, exploiting the spaces of the rationalist building originally used as a boiler room. The Troisi Cinema became a unique space on the European scene, with the historic cinema hall equipped with the most advanced projection technology (it also has seats reserved for people with disabilities and a system for the hearing and visually impaired, so that everyone can access the screenings), a foyer-bar, a brightly lit terrace, a multifunctional space for exhibitions and events, and a study-library completely free of charge and the first example in Italy that will be open 365 days a year, 24 hours a day, with comfort and seats inside and eventually on the terrace. Moreover, according to Open Impact, an innovative start-up and research spin-off of the University of Rome Tor Vergata, the impact of this social, economic and environmental redevelopment over the next 10 years is equivalent to 30 tonnes of CO2 saved each year, thanks to green partner Iberdrola, and to 70% less management costs for the public treasury. The restoration work by architects Raffaella Moscaggiuri and Claudia Tombini, which lasted about two years under the supervision of the Soprintendenza Speciale Archeologia Belle Arti e Paesaggio of Rome, preserved material traces of the original construction, adding the necessary new functional elements for contemporary use. The main works include restitution of a functional circularity, conservation of the Carrara marble floors, as well as of the travertine steps and cladding at the entrance, recovering of some bas-reliefs, and intervention for the large glass window on the terrace. In addition, the cinema is enriched by Lorenzo Terranera's mural illustrations that lead guests from the foyer, through the internal stairs, to the study room, to retrace the ten years of the Piccolo America experience. The Troisi Cinema wants therefore to be a new and inclusive space, in terms of audiences, proposals and programming choices, but also a space for culture, with the aim of creating a meeting place. The Troisi Cinema, a building granted by Roma Capitale through a public tender, is a project of Piccolo America made possible thanks to the support of the Ministry of Culture, the Lazio Region, with Lazio Innova, BNL BNP Paribas Group, SIAE (Società Italiana degli Autori ed Editori), Otto per mille of the</p>	

	Waldensian Church, the green partner Iberdrola and the digital sponsor TIM.	
Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i>	<ul style="list-style-type: none"> https://www.professionearchitetto.it/news/notizie/29053/Roma-il-Cinema-Troisi-riapre-i-battenti-rinnovato-e-pronto-a-rilanciare-la-settima-arte-nella-Capitale https://roma.repubblica.it/cronaca/2021/08/24/news/cinema_troisi_21_settembre-315146220/ https://www.romatoday.it/politica/cinema-troisi-restauro-progetto.html https://www.romatoday.it/eventi/cultura/inaugurazione-cinema-troisi-trastevere-21-settembre-2021.html https://archello.com/project/restoration-of-the-ex-cinema-induno 	
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>Vv.Aa., <i>I dieci punti del comitato dei monumenti moderni</i>, in F. Perego, <i>Monumenti moderni, un'emergenza nuova</i>, in "Edilizia Popolare", 216-217, 1991, p. 48.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of 20th Century Architectural Heritage</i>, Madrid Document, 2011, http://orcp.hustoj.com/wp-content/uploads/2016/04/madriddocumentenglish.pdf.</p> <p>The Getty Conservation Institute, <i>A Colloquium to Advance the Practice of Conserving Modern Heritage</i>, 2013, https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/colloquium_report.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches for the Conservation of Twentieth-Century Architectural Heritage</i>, Madrid Document, 2014, http://www.icomos-isc20c.org/pdf/madrid_doc_10.26.pdf.</p> <p>ICOMOS ISC20C, <i>Approaches to the Conservation of Twentieth-Century Cultural Heritage</i>, Madrid-New Delhi Document, 2017, http://www.icomos-isc20c.org/pdf/madrid-new-delhi-document-2017.pdf.</p>	
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<p>20th century architectural heritage</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>	
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  </div> <div> <p>https://www.professionearchitetto.it/news/notizie/29053/Roma-il-Cinema-Troisi-riapre-i-battenti-rinnovato-e-pronto-a-rilanciare-la-settima-arte-nella-Capitale</p> </div>	



Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Rome
		Address	Via Girolamo Induno 1
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function	Cinema-theatre hall in House of GIL	
		Century	20th century	
		Start year	1937	
		End year		
		Function	Parish hall	
		Century	20th century	
		Start year	1950s	
		End year	1997	
		Function	Cinema	
		Century	20th-21st century	
		Start year	1997	
		End year	2012	
OTHER	Time period (select from list)	Ancient period		
	Temporal significant events in the history of the heritage asset (add text)	Post industrial revolution period		
		Event	Realisation	
		Actor	Luigi Moretti	
		Century	20th century	
		Start year	1933	
		End year	1937	
		Investigation status (select from list)	Un-documented	
			Archived	
			Studied	
		Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	
	Artisanhip			
Authorship	Luigi Moretti			
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Rationalist architecture masterpiece			

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
	Virtual reality		
Time period (select from list)	Ancient period		
	Post industrial revolution period		

	Temporal <i>significant events in the history of the heritage artefact</i> <i>(add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_032

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Cinema		
	Foyer		
	Spaces for exhibitions and events		
	Study-library		
	Terrace		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials	Glass	
	Metal materials	Iron	
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites	Carrara marble, travertine	
	Vegetable, mineral and animal fibres		
	Wood		
Wood derivatives			
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	System for the hearing and visually impaired		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Public and private heritage institutions responsible for managing monuments and sites		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	Management and administration practices; Adaptive re-use of CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	

	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Adaptive re-use of CH
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_032

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices		Skills on sustainable management of Cultural Heritage			
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction					
			• Adaptive re-use of CH		Skills on application of new technologies	Skills on implementing measures to encourage people to practice heritage		
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					Skills on implementing measures to encourage people to practice heritage
			• Encounters with communities					

		• Educational activities and programmes					
		• Creation of partnership and networking				Skills on encouraging and supporting the development of networks	
		• Advertisements with CH					
		• Gaming with CH					

1. CASE STUDY (INTRODUCTION)			BP_033
Best practice ref. <i>identification code (add text)</i>		BP_033	
Object <i>object of the case study (add text)</i>		URBINO COLLEGES, URBINO, ITALY	
Intervention <i>subject of the case study (add text)</i>		Conservation and sustainable use of a complex	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century	
	Start date	2015	
	End date	2017	
Actors <i>main actors involved (add text)</i>		Università degli studi di Urbino "Carlo Bo" (group leader), MTA Associati, Politecnico di Milano, Institute for the Conservation and Promotion of Cultural Heritage of the National Research Council, Regional agency for study entitlement University of Urbino	
Description of the best practice <i>Brief abstract (add text)</i>		<p>The Urbino Colleges have been included in the list of 2015 grants awarded by Keeping It Modern, an initiative of The Getty Foundation. Thanks to this grant, the outstanding architectural significance of the complex has been recognised at the international level, as well as its potential to be a reference for the conservation of modern materials and architectural elements. One of the aim of the conservation plan is to collect, explore and discuss different point of view expressed by different stakeholders, also through some workshops, in an approach that is complex and interdisciplinary, since it include a comprehensive evaluation and understanding of the material and immaterial values that are represented in the complex, including the different meaning experienced everyday by the students and workers that live, study and meet in those spaces. At the same time, the conservation plan is aimed at suggesting feasible solutions and development scenarios which includes several aspects (e.g. conservation procedures and guidelines, identification of new functions and uses, energy efficiency to improve the indoor comfort and reduce the operating costs, facilities, new connections with the city), also taking into account the specific issues of the site (e.g. the size of the complex, the need of working while the rooms are occupied by the students and the accessibility problems that are a crucial issue to make possible a regular maintenance routine). With reference to the materials conservation, exemplary is the accurate analysis on reinforced concrete, in which also the repairs already performed over time have been considered. In this regard, in the 1990's Giancarlo De Carlo developed a model for the repairs, witch are still recognizable on the "Colle". The concrete patches has regular shape, a surface hammered and in relief. An abacus of materials deterioration and damage has been done not only for reinforced concrete, but also for the brick surfaces, in order to map and evaluate the state of conservation. The conservation plan survey also reveals the sad condition of windows. In this regard, the original wooden window frames are almost all in a delicate condition and those that have been replaced are mostly in aluminium, some in PVC. For the new solutions, it has been chosen a thermal break aluminum window frame. With regard to the analysis and preventive conservations of the complex, it has also been monitored air temperature and humidity. This campaign of measurements consisted in a monitoring of indoor and outdoor climatic conditions through data-loggers and seasonal thermographic and psychrometric mapping. This was to assess both the current hygrothermal comfort conditions, both the performances of the building envelope in different seasonal conditions. Data have fed a building-HVAC model, which was used to design an appropriate strategy for retrofitting and improving the energy</p>	

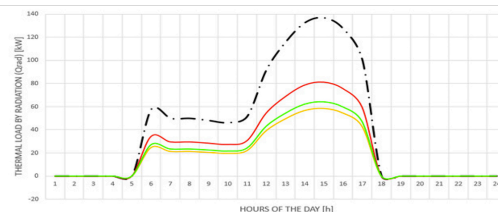
	efficiency of the complex. Some solutions were implemented on a pilot site in order to compare the building performances before and after the retrofitting.
Bibliography and sitography main sources referred to the best practice (add text)	<ul style="list-style-type: none"> Borgarino M.P., <i>Giancarlo De Carlo's Urbino University Colleges: A conservation management plan for long-term maintenance and sustainable use of the complex</i>, in Van Balen, Verstrynghe (eds.), <i>Structural Analysis of Historical Constructions: Anamnesis, diagnosis, therapy, controls</i>. SAHC Conference 2016 (Leuven), Taylor & Francis Group, London 2016. Borgarino M.P., Mazzolani M., Troisi A., Bazzoli N., Del Curto D., Sansonetti A., <i>I Collegi di Giancarlo De Carlo a Urbino. Piano di conservazione e gestione</i>, Mimesis, Sesto San Giovanni 2019. Canziani A., Borgarino M.P., <i>Giancarlo De Carlo's Collegi in Urbino: Towards a Management Strategy for the Conservation and Sustainable Use of the Complex</i>, in Tostões A., Kimm J.S., Kim T.W. (eds.), <i>Expansion & Conflict</i>. Proceedings of the 13th Docomomo International Conference (Seoul, 24-27 September 2014), Docomomo International & Docomomo Korea, Seoul 2014, pp. 126-130. Joppolo C.M., Del Curto D., Luciani A., Valisi L.P., Bellebono M., <i>Keeping it modern, making it sustainable. Monitoring and energy retrofitting the Urbino University Colleges</i>, in "Energy Procedia", 133, 2017, pp. 243-256. Spada P., <i>A therapy for the Collegi</i>, in Guccione M., Vittorini A. (eds.), <i>Giancarlo De Carlo. Le ragioni dell'architettura</i>, Mondadori, Milano 2005, pp. 166-169. Università degli Studi di Urbino Carlo Bo, <i>Giancarlo De Carlo "Collegi" in Urbino: Conservation Plan</i>, 2017. https://www.getty.edu/foundation/initiatives/current/keeping_it_modern/report_library/urbino.html?q=%7B%7D https://whc.unesco.org/en/list/828/
Documental references (add text)	CH general criteria framework (common framework, documents, CH) Vv.Aa., <i>I dieci punti del comitato dei monumenti moderni</i> , in F. Perego, <i>Monumenti moderni, un'emergenza nuova</i> , in "Edilizia Popolare", 216-217, 1991, p. 48. ICOMOS ISC20C, <i>Approaches for the Conservation of 20th Century Architectural Heritage</i> , Madrid Document, 2011, http://orcp.hustoj.com/wp-content/uploads/2016/04/madriddocumentenglish.pdf . The Getty Conservation Institute, <i>A Colloquium to Advance the Practice of Conserving Modern Heritage</i> , 2013, https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/colloquium_report.pdf . ICOMOS ISC20C, <i>Approaches for the Conservation of Twentieth-Century Architectural Heritage</i> , Madrid Document, 2014, http://www.icomos-isc20c.org/pdf/madrid_doc_10.26.pdf . ICOMOS ISC20C, <i>Approaches to the Conservation of Twentieth-Century Cultural Heritage</i> , Madrid-New Delhi Document, 2017, http://www.icomos-isc20c.org/pdf/madrid-new-delhi-document-2017.pdf .
Keywords transversal tags among different fields of research (add text)	20th century architectural heritage Conservation Preservation Valorisation

Image/s of the best practice

nr. 1/3 image/s to identify the type of best practice

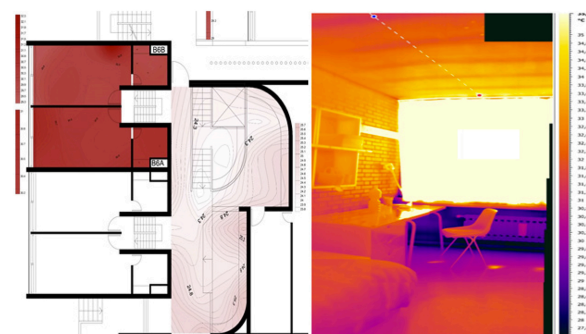


Università degli Studi di Urbino Carlo Bo, *op. cit.*, 2017, p. 325.



Università degli Studi di Urbino Carlo Bo, *op. cit.*, 2017, p. 290.

TYPOLOGY OF GLASS TO SOLAR CONTROL: DOUBLE-GLAZED WINDOW WITH	g [-]	ϵ_{ext} [-]	ϵ_{ext} [-]	selectivity
CASE 1: STRATIFIED LOW- EMISSIVITY GLASS	0,43	0,04	0,29	1,56
CASE 2: STRATIFIED SELECTIVE GLASS	0,31	0,02	0,46	1,90
CASE 3: TEMPERED SELECTIVE GLASS	0,34	0,04	0,41	1,68



Università degli Studi di Urbino Carlo Bo, *op. cit.*, 2017, p. 278.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Urbino
		Address	Via Giancarlo De Carlo
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Colleges	
		Century	20th century	
		Start year	1966	
		End year		
	Time period (select from list)	Ancient period		
		Post industrial revolution period		
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	Realisation of the Colle (the dormitories of the University of Urbino)	
		Actor	Giancarlo De Carlo	
		Century	20th century	
		Start year	1962	
		End year	1965	
		Event	Realisation of the Tridente (Block B)	
		Actor	Giancarlo De Carlo	
		Century	20th century	
Start year		1974		
End year		1978		
Event		Realisation of the Vela (Block A)		
Actor		Giancarlo De Carlo		
Century	20th century			
Start year	1974			
End year	1979-1980			
	Event	Realisation of the Aquilone and the Serpentine (Block C)		
	Actor	Giancarlo De Carlo		
	Century	20th century		
	Start year	1974		
	End year	1979-1980		
OTHER	Investigation status (select from list)	Un-documented		
		Archived		
		Studied		
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	Architectural significance	
		Artisanhip		
		Authorship	Giancarlo De Carlo	
		Knowledge/ideas		
		Performance		
		Rituals/festivals/folklore/ceremonies		
		Social activities/practices	Social value	
		Traditional arts		
		Traditional communication means		
		Traditional construction systems		
		Traditional craftsmanship		
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Connection with landscape and the historic city	

Cultural Heritage Type

ARTEFACTS (particular consideration for, if relevant)

THE HERITAGE ARTEFACT (the main)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian

OTHER			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i> <i>(add text)</i>	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
		Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_033

Type of best practice <i>(select from list)</i>	Conservation Preservation Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Colle Tridente Vela Aquilone		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials Ceramic materials Concrete Concrete derivatives Glass materials Metal materials Paints, varnishes and enamels Plasters Polymeric materials Marbles, travertines, stones and granites Vegetable, mineral and animal fibres Wood Wood derivatives	Brick Reinforced concrete Glass slabs Aluminium window frames, steel PVC window frames Wooden window frames	
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Probes for monitoring indoor microclimate		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Public and private heritage institutions responsible for managing monuments and sites Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES TRANSFERABILITY	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i> <i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i> <i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition,</i>	Monitoring Preventive conservation; Diagnostic Activities; Pre-consolidation, cleaning, consolidation and protection of CH

		<i>management and storage, catalogue of standards, replicable strategies)</i>	materials; Maintenance practices; Management and administration practices; Adaptive re-use of CH; Accessibility
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Dissemination through publications; Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Encounters with communities; Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_033

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation			Skills on taking care of Cultural Heritage materials		
•	•		Diagnostic activities			Skills on taking care of Cultural Heritage materials		
•	•		Identification of the risks and deterioration patterns			Skills on taking care of Cultural Heritage materials		
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•		Reinforcement of CH buildings					
•	•		Monitoring		Skills on application of new technologies			
•	•		Maintenance practices			Skills on taking care of Cultural Heritage materials		
•	•		Management and administration practices			Skills on organisation and logistics of complex situations (management of means and resources)		
•	•	•	Promotion and support of interventions for conservation					

•	•	•	Project of restoration					
•			Reconstruction					
	•	•	Adaptive re-use of CH			Skills on organisation and logistics of complex situations (management of means and resources)		
	•	•	Accessibility			Skills on organisation and logistics of complex situations (management of means and resources)		
		•	Dissemination through publications				Skills on training and educational activities	
		•	Organisation of events and festivals					
		•	Encounters with communities					Skills on encouraging and supporting the development of networks
		•	Educational activities and programmes					Skills on training and educational activities
		•	Creation of partnership and networking				Skills on encouraging and supporting the development of networks	
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_034
Best practice ref. <i>identification code (add text)</i>	BP_034	
Object <i>object of the case study (add text)</i>	VILLA CONTARINI, PIAZZOLA SUL BRENTA (PD), ITALY	
Intervention <i>subject of the case study (add text)</i>	Preservation and reinforcement of a Palladian villa	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2000
	End date	2004
Actors <i>main actors involved (add text)</i>	Faccio Engineering with prof. Pierluigi Grandinetti and prof. Eugenio Vassallo (University Iuav of Venice)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Villa Contarini in Piazzola sul Brenta, with its gardens, barchesse, waterways and large square, is a site of absolute architectural and landscape interest, providing historical evidence of the role of the villas on the mainland of the Serenissima. The interventions for its preservation have been divided into different functional and performance lots. Among these, it is within the framework of the "Culture and Tourism" Stralcio Plan - FSC 2014/2020 that the Italian Ministry for Cultural Heritage has admitted to funding an intervention to improve the monumental complex. In this phase, the object of the works were, in particular, the structural and plant engineering components, which are essential to make the spaces of the complex usable. Particularly noteworthy is the safety intervention, carried out through the addition of a metal structure to consolidate the wall box, which made it possible to maximise the conservation of the existing material substance. Today the complex is a cultural centre of attraction for the area. Alongside guided tours and educational activities aimed at raising awareness of the entire architectural and landscape complex, with the rich decorative apparatus that characterises it, the commitment to enhancing the value of the villa also takes the form of seeing it not only as a museum of itself but as an evocative contemporary venue in which to hold exhibitions and events.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • Vassallo E. (a cura di), <i>Villa Contarini: conservazione e valorizzazione delle Foresterie vecchie</i>, Istituto regionale per le ville venete, Venezia 2004. • https://www.villacontarini.eu • https://annoeuropeo2018.beniculturali.it/eventi/villa-contarini-la-capitale-delle-ville/ • https://www.padovaoggi.it/attualita/lavori-finanziamento-veneto-villa-contarini-piazzola-sul-brenta-16-ottobre-2019.html • https://www.marconisrl.com/lavori/restauro-conservativo-villa-contarini/ • http://www.ducalarestauro.it/portfolio-item/villa-contarini/ 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	
Keywords <i>transversal tags among different fields of research (add text)</i>	Ancient constructions	
	Conservation	
	Preservation	
	Valorisation	

Image/s of the best practice

nr. 1/3 image/s to identify the type of best practice



<https://faccioengineerblog.wordpress.com/2000-piazzola-sul-brenta-copia/>



<https://www.marconisrl.com/lavori/restauro-conservativo-villa-contarini/>



<https://www.villacontarini.eu/galleria-immagini/>

<https://www.marconisrl.com/lavori/restauro-conservativo-villa-contarini/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	Piazzola sul Brenta (PD)
		Address	Via L. Camerini 1
		Country	Italy
		Continent	Europe (European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Villa
		Century	16th-20th century
		Start year	1546
		End year	1970
	Time period (select from list)	Function	Venue for congresses, exhibitions, concerts and other events
		Century	20th century
		Start year	1970
		End year	
OTHER	Investigation status (select from list)	Ancient period	
		Post industrial revolution period	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Event	Realisation
		Actor	Andrea Palladio
		Century	16th-17th century
		Start year	1546
		End year	
		Un-documented	
		Archived	
		Studied	
		Architectural typology	
		Artisanship	
		Authorship	Andrea Palladio
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
	Time period (select from list)	Digital	Art
			Virtual reality
		Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage artefact</i>	Event	
		Actor	
		Century	
		Start year	

	<i>(add text)</i>	End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to immaterial aspects (select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_034

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Villa		
	Old guesthouses		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials	Brick	
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials	Steel	
	Paints, varnishes and enamels	Painted surfaces	
	Plasters	Plaster	
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood	Wood	
	Wood derivatives		
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)	
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	Pre-consolidation, cleaning, consolidation and protection of CH materials; Reinforcement of CH

		<i>standards, replicable strategies)</i>	buildings; Dissemination through publications
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals; Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_034

			(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
Conservation	Preservation	Valorisation	Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH					
•	•	•	Communication of CH					
•	•		Preventive conservation					
•	•		Diagnostic activities					
•	•		Identification of the risks and deterioration patterns					
•	•		Materials conservation tests					
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
•	•		Reinforcement of CH buildings			Skills on taking care of Cultural Heritage materials		
•	•		Monitoring					
•	•		Maintenance practices					
•	•		Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•			Reconstruction					
	•	•	Adaptive re-use of CH					
	•	•	Accessibility					
		•	Dissemination through publications			Skills on training and educational activities		
		•	Organisation of events and festivals					Skills on implementing measures to encourage people to practice heritage
		•	Encounters with communities					
		•	Educational activities and programmes					Skills on training and educational activities
		•	Creation of partnership and networking					
		•	Advertisements with CH					
		•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_035
Best practice ref. <i>identification code (add text)</i>	BP_035	
Object <i>object of the case study (add text)</i>	SÃO ROQUE CHURCH, LISBON, PORTUGAL	
Intervention <i>subject of the case study (add text)</i>	Preservation of a church with azulejo panels	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2015
	End date	2016
Actors <i>main actors involved (add text)</i>	Nova Conservação S.A., LNEC, Museu Nacional do Azulejo, Museu de São Roque, Laboratório HERCULES - Universidade de Évora	
Description of the best practice <i>Brief abstract (add text)</i>	<p>After a conservation condition survey, the restoration intervention carried out by Nova Conservação S.A. at the São Roque Church regarded the ceiling, vertical surfaces, altar, nave and high choir of the building. The pre-consolidation, cleaning, consolidation and protection of the asset materials have been done on mono and polychromatic plasterworks, mural paintings, stone materials, and treated, gilded and polychromatic woods. Of particular interest are also the azulejo panels of the church. In this regard, a deep analysis work has been carried out thanks to the collaboration between the Laboratório Nacional de Engenharia Civil (LNEC) of Lisbon, the Museu Nacional do Azulejo, the Museu de São Roque and the Laboratório HERCULES - Universidade de Évora. The azulejos of the São Roque Church, situated in its chapel, are justly considered one of the major majolica works made anywhere during the last quarter of the 16th century. This earliest known surviving group of Portuguese azulejos signed and dated (Francisco de Matos, 1584) has long puzzled art historians mostly because their magnificence seems to be an almost unique case with no predecessors and few immediate successors in Portugal. For them, it has been used analytical means to characterize the tiles. The fragments detached from the azulejos were stabilized in epoxy resin, lapped and polished to obtain a flat surface for observation and analysis by scanning electron microscopy coupled with an X-ray energy-dispersive spectrometer (SEM-EDS). Optical images of cross sections were obtained with a Leica DFC295 digital camera coupled to a Leica M205C stereomicroscope. The pigmented glaze was analysed in situ, over the face of the tiles, by energy-dispersive X-ray fluorescence (ED-XRF) with a hand-held Bruker Tracer III spectrometer. Spectra were interpreted with the ARTAX software. Principal component analysis (PCA) was made of EDS results using the SPSS® software platform by IBM Analytics.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> http://www.ncrestauro.pt/index.php/en/portfolio/conservation-and-restoration/243-sao-roque-chapel https://www.lisbona.info/cosa-vedere-lisbona/chiesa-sao-roque/ https://www.hisour.com/church-of-saint-roch-lisbon-portugal-55427/ http://azulejos.lnec.pt/AzuRe/SHGC_n01/006-JMMimoso4_sao%20roque_final.pdf 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	

Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	Ancient constructions
	Conservation
	Preservation
	Valorisation

Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice



<http://www.ncrestaur.o.pt/index.php/en/portfolio/conservation-and-restoration/243-sao-roque-chapel>



<http://www.ncrestaur.o.pt/index.php/en/portfolio/conservation-and-restoration/243-sao-roque-chapel>



<http://www.ncrestaur.o.pt/index.php/en/portfolio/conservation-and-restoration/243-sao-roque-chapel>

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Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Lisbon
		Address	Largo Trindade Coelho
		Country	Portugal
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
		Underground	
		Cave	
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Church
	Time period (select from list)	Century	16th-21st century
OTHER	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year	1533
	Investigation status (select from list)	End year	On-gong
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Ancient period	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Post industrial revolution period	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Event	Realisation of the church
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Actor	Filippo Terzi
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Century	16th century
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Start year	1533
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	End year	1533
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Event	Realisation of the chapels
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Actor	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Century	16th-19th century
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Start year	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	End year	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Un-documented	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Archived	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Artisanship	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Authorship	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Knowledge/ideas	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Performance	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Rituals/festivals/folklore/ceremonies	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Social activities/practices	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Traditional arts	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Traditional communication means	
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Traditional construction systems	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Traditional craftsmanship	Azulejo panels
OTHER	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)		

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
	Type (of the artefact asset) (select from list)		Art works
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Eco-facts
	Type (of the artefact asset) (select from list)		Ethnographic
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Historic replica
	Type (of the artefact asset) (select from list)		Utilitarian
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Written evidences
	Type (of the artefact asset) (select from list)	Immovable	Carved
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Frescoes
	Type (of the artefact asset) (select from list)		Graffiti
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Mosaics
	Type (of the artefact asset) (select from list)	Digital	Art
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)		Virtual reality
	Type (of the artefact asset) (select from list)		
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Time period (select from list)	Ancient period	
	Time period (select from list)	Post industrial revolution period	
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Temporal <i>significant events in the history of the</i>	Event	
	Temporal <i>significant events in the history of the</i>	Actor	
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Temporal <i>significant events in the history of the</i>	Century	
	Temporal <i>significant events in the history of the</i>		

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_035

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	São Roque Church		
	Church chapel		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		Glazed tiles (azulejos)
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		Mural paintings
	Plasters		Mono and polychromatic plasterworks
	Polymeric materials		
	Marbles, travertines, stones and granites		Stone materials
	Vegetable, mineral and animal fibres		
	Wood		Treated, gilded and polychromatic woods
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Natural risks (biological)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	Scanning electron microscopy X-ray energy-dispersive spectrometer (SEM-EDS) Leica DFC295 digital camera Leica M205C stereomicroscope Energy-dispersive X-ray fluorescence (ED-XRF) Hand-held Bruker Tracer III spectrometer ARTAX software SPSS® software platform by IBM Analytics		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	Diagnostic activities

	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Studies on CH; Pre-consolidation, cleaning, consolidation and protection of CH materials; Dissemination through publications
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_035

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities		Skills on application of new technologi es	Skills on taking care of Cultural Heritage materials		
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials			Skills on taking care of Cultural Heritage materials		
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction					
			• Adaptive re-use of CH					
			• Accessibility					
			• Dissemination through publications			Skills on training and educational activities		
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking				Skills on encouraging and supporting the development of networks	
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_036
Best practice ref. <i>identification code (add text)</i>	BP_036	
Object <i>object of the case study (add text)</i>	CELICA HOSTEL, LJUBLJANA, SLOVENIA	
Intervention <i>subject of the case study (add text)</i>	Creative reuse of a former prison	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2001
	End date	2018
Actors <i>main actors involved (add text)</i>	Architects Aleksander "Sasa" Ostan, Janko Rozic and Ira Zorko, with more than 80 artists from all over the world; Lesnina MG Oprema company	
Description of the best practice <i>Brief abstract (add text)</i>	<p>After the Austro-Hungarian army built its army barracks at Metelkova, the building of Hostel Celica was used as a prison since 1883. In 1991, the Yugoslav People's Army (JNA) left the newly independent Slovenia and the army barracks were abandoned. The Network for Metelkova initiative, a collective of artists, wanted to formally acquire the vacant army barracks and to transform it into a multicultural centre. For this, it tried to obtain the proper paperwork for the use of the empty spaces, but with no success. Two years later, in 1993, the city authorities began demolishing the former army barracks, which prompted the artists to illegally occupy the spaces to prevent the demolition. The city authorities tried to evict them by turning off the water and electrical supply, but the artists' determination was unmatched. At the same time, architects Aleksander "Sasa" Ostan, Janko Rozic and Ira Zorko put forward the proposal to convert the prison into a youth hostel. In 2001, after almost ten years of creative planning, renovation and transformation of the building, the project received financial support and the green light from the authorities. More than 80 artists from all over the world took part in the renovation and, in 2003, the first guests spent their night in Hostel Celica. In 2006 Lonely Planet selects Hostel Celica as the no. 1 Hippest Hostel in the world. Hostel Celica opened its doors again in 2018. Works, performed by the Lesnina MG Oprema company on the basis of a public tender, included the energy renovation of the heating room, new air-conditioning of the attic, a new cooling and heating system on the first floor and a comprehensive renewal of the cooling and ventilation system for the whole building. Building fire safety has also been improved. The majority of kitchen appliances were replaced to increase energy efficiency and the lighting installation was renovated or upgraded to LED technology. Another novelty is air-conditioning in the rooms.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> Moore D., <i>Driving Home Both Ways</i>, Parthian, Cardigan 2018. Signorelli L., <i>Da carcere a ostello per la gioventù. La storia del Celica Hostel a Lubiana</i>, in "Recupero e Conservazione", 95, 2011, pp. 64-71. https://www.hostelcelica.com/en/ex-prison-hostel/ https://www.ljubljana.si/en/news/renovated-hostel-celica-opened-its-doors-again/ https://www.traveller.com.au/bed-down-in-the-lockup-in-slovenia-gvws9 	
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)	

Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	Post industrial revolution architecture
	Preservation
	Valorisation

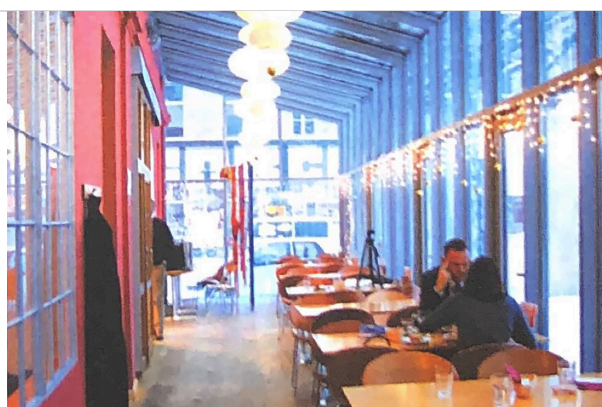
Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice



<https://www.hostelcelica.com/en/ex-prison-hostel/>



Signorelli L., op. cit.,
 p. 67.



Signorelli L., op. cit.,
 p. 67.

<https://www.ljubljana.si/en/news/renovated-hostel-celica-opened-its-doors-again/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Ljubljana
		Address	Metelkova ulica 8
		Country	Slovenia
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
Symbolic and Memorial		(monuments, plates, etc.)	
Vernacular			
Watermanagement systems	(canals, dams, irrigation, etc.)		

CHARACTERISATION OF THE HERITAGE ASSET <i>(the main characteristics of the heritage asset)</i>	Function <i>significant uses of the heritage asset</i> <i>(add text)</i>	Function	Military prison
		Century	19th-20th century
		Start year	1883
		End year	1991
	Time period <i>(select from list)</i>	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> <i>(add text)</i>	Event	Realisation
		Actor	Austro-Hungarian Empire
		Century	19th century
		Start year	1882
		End year	1883
		Event	Abandonment
		Actor	Yugoslav People's Army (JNA)
		Century	20th century
Start year		1991	
End year		1991	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i> <i>(add text)</i>	Architectural typology	Ancient prison
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type <i>(of the artefact asset)</i> <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
		Immovable	Ethnographic
			Historic replica
			Utilitarian
			Written evidences
			Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period <i>(select from list)</i>		Ancient period
Temporal <i>significant events in the history of the</i>	Post industrial revolution period		
	Event		
	Actor		
Century			

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Adaptive re-use of CH



Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_036

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research					
			• Studies on CH					
			• Documentation of CH					
			• Communication of CH					
			• Preventive conservation					
			• Diagnostic activities					
			• Identification of the risks and deterioration patterns					
			• Materials conservation tests					
			• Pre-consolidation, cleaning, consolidation and protection of CH materials					
			• Reinforcement of CH buildings					
			• Monitoring					
			• Maintenance practices					
			• Management and administration practices					
			• Promotion and support of interventions for conservation					
			• Project of restoration					
			• Reconstruction					
			• Adaptive re-use of CH		Skills on achievement of environmental challenges and objectives		Skills on implementing measures to encourage people to practice heritage	
			• Accessibility					
			• Dissemination through publications					
			• Organisation of events and festivals					
			• Encounters with communities					
			• Educational activities and programmes					
			• Creation of partnership and networking					
			• Advertisements with CH					
			• Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_037
Best practice ref. <i>identification code (add text)</i>	BP_037	
Object <i>object of the case study (add text)</i>	CASA BATLLÓ, BARCELONA, SPAIN	
Intervention <i>subject of the case study (add text)</i>	Participatory preservation of a masterpiece	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2017
	End date	2019
Actors <i>main actors involved (add text)</i>	Xavier Villanueva (architect, director of the works), Joan Olona (architect), Mireia Bosch (architect), Ignasi Villanueva (civil engineer), Neus Zapata (head of the restoration team)	
Description of the best practice <i>Brief abstract (add text)</i>	<p>After two years of analysis and planning, short, medium and long term interventions and maintenance practices were defined for Casa Batlló. The intervention carried out in 2019 belongs to the short term ones. With regard to the façade, after the restoration work in 2001, an intervention of preservation was carried out. It was carefully tapped for the individuation of echoes, and then glass, ceramic, iron, wood and stone were pre-consolidated, cleaned, consolidated and protected. In the interior, stratigraphic tests carried out on the main floor revealed the original stucco coating, hidden under several layers of paint. Samples analysed in the laboratory using photomicrographs and X-ray diffraction further demonstrated the preciousness and quality of the wall and ceiling coverings. They had been made of lime mortar stucco with incisions, then filled in with lime mortar, and finished with wax paint; in other cases, the joints of the incisions were filled in with gold bread. In order to recover the original stucco hidden under the different layers of varnish, a mechanical peeling was carried out with a scalpel, followed by a chemical peeling. The surface was then cleaned. Elements such as doors, windows, lamps were also recovered, and works were carried out on strengthening the structures, providing water and electricity, and improving fire detection and extinguishing systems. In the central part of the inner courtyard Gaudí also installed a lift, with a wooden cabin, which is still in operation today. The choice was to combine cultural visit and restoration to share with visitors the discoveries of the shipyard and to show how the restoration team worked. There are also tablets with information, streams showing the work process and staff trained specifically to resolve visitors' doubts about restoration. Casa Batlló is now a space for cultural visits and events. It won the 2004 Europa Nostra Prize in recognition of the conservation of this architectural heritage. Europa Nostra is a pan-European cultural heritage organisation which is recognised by the European Commission, the executive body of the European Union, which established the European Union Prize for Cultural Heritage in 2002, and decided that this would be managed by Europa Nostra. The award ceremony for the prize for the intervention carried out at Casa Batlló took place in 2005 in Bergen in Norway. In 2017, the intervention also received the Restoration Special Mention in the framework of the European Award for Architectural Heritage Intervention, a biennial competition organised by COAC (Association of Architects of Catalonia) and AADIPA (Association of Architects for the Protection and Conservation of Architectural Heritage) under the patronage of the Ministry of Culture of the Government of Catalonia and the City of Barcelona.</p>	

Bibliography and sitography <i>main sources referred to the best practice</i> <i>(add text)</i>	<ul style="list-style-type: none"> • https://www.casabatlo.es/en/ • https://www.classicult.it/gaudi-dopo-oltre-cento-anni-torna-a-splendere-casa-batllo/ • https://whc.unesco.org/en/list/320/ • https://www.sunbell.it/2021/07/14/vincitori-european-award-for-architectural-heritage-intervention/
Documental references <i>(add text)</i>	CH general criteria framework (common framework, documents, CH)
Keywords <i>transversal tags among different fields of research</i> <i>(add text)</i>	<div>Post industrial revolution architecture</div> <div>Conservation</div> <div>Preservation</div> <div>Valorisation</div>
Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	<div>  https://www.casabatlo.es/en/news/the-facade-is-back/ </div> <div>  https://www.casabatlo.es/en/news/the-facade-is-back/ </div>



<https://www.casabatllo.es/en/antoni-gaudi/casa-batllo/inside/>

<https://www.casabatillo.es/en/antoni-gaudi/casabatillo/facade/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Barcelona
		Address	Pg. De Gràcia 43
		Country	Italy
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function significant uses of the heritage asset (add text)	Function	House
		Century	20th century
		Start year	1906
		End year	1995
		Function	Space for events
		Century	20th-21st century
		Start year	1995
		End year	2002
		Function	Space for events and cultural visits
		Century	21st century
		Start year	2002
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal significant events in the history of the heritage asset (add text)	Event	Realisation
		Actor	Antoni Gaudí
		Century	20th century
		Start year	1904
End year		1906	
Event		Restoration works	
Actor			
Century		21st century	
Start year		2001	
End year		2001	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects connection to immaterial aspects (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	Antoni Gaudí
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type (of the artefact asset) <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
		Time period <i>(select from list)</i>	Ancient period
		Post industrial revolution period	
Temporal significant events in the history of the heritage artefact <i>(add text)</i>	Event		
	Actor		
	Century		
	Start year		
	End year		
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects connection to immaterial aspects <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

3. CHARACTERISATION OF THE BEST PRACTICE

BP_037

Type of best practice <i>(select from list)</i>	<div>Conservation</div> <div>Preservation</div> <div>Valorisation</div>		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	<div>Façade</div> <div>Roof terrace</div> <div>Interiors</div> <div>Main floor</div> <div>Patio</div> <div>Indoor garden</div>		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	<div>Bituminous materials</div> <div>Ceramic materials</div> <div>Concrete</div> <div>Concrete derivatives</div> <div>Glass materials</div> <div>Metal materials</div> <div>Paints, varnishes and enamels</div> <div>Plasters</div> <div>Polymeric materials</div> <div>Marbles, travertines, stones and granites</div> <div>Vegetable, mineral and animal fibres</div> <div>Wood</div> <div>Wood derivatives</div>	<div>Ceramic</div> <div>Glass</div> <div>Iron</div> <div>Stucco</div> <div>Stone</div> <div>Wood</div>	
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	<div>Natural risks (biological)</div>		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	<div>—</div>		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	<div>General and educational users and visitors, tourists</div> <div>Professional researchers</div>		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	<div>DIGITAL INNOVATION</div> <div>DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES</div>	<div><i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i></div> <div><i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i></div>	

	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i>	Diagnostic activities; Identification of the risks and deterioration patterns; Pre-consolidation, cleaning, consolidation and protection of CH materials; Maintenance practices
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals; Encounters with communities; Educational activities and programmes

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_037

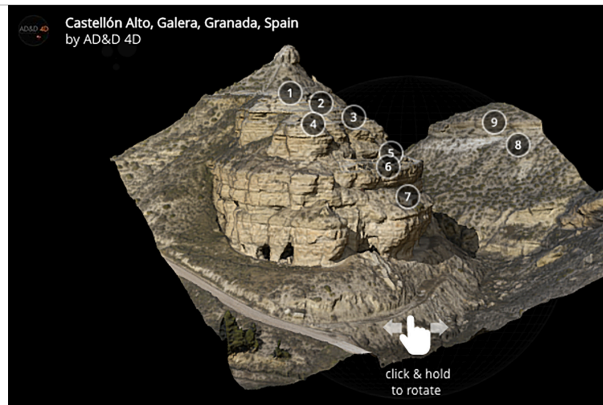
Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities		Skills on taking care of Cultural Heritage materials		
			• Identification of the risks and deterioration patterns		Skills on taking care of Cultural Heritage materials		
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials		Skills on taking care of Cultural Heritage materials		
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices		Skills on taking care of Cultural Heritage materials		
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration				
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				Skills on implementing measures to encourage people to practice heritage
			• Encounters with communities				Skills on implementing measures to encourage people to practice heritage
			• Educational activities and programmes				Skills on training and educational activities
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_038
Best practice ref. <i>identification code</i> (add text)	BP_038	
Object <i>object of the case study</i> (add text)	GALERA, GRANADA, SPAIN	
Intervention <i>subject of the case study</i> (add text)	Management of the environment of an ancient village	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study</i> (add text)	Century	20th-21st century
	Start date	1960s
	End date	Ongoing
Actors <i>main actors involved</i> (add text)	CARARE Association (association funded by the European Commission's ICT Policy Support Programme)	
Description of the best practice <i>Brief abstract</i> (add text)	<p>The management of the environment of Galera is an exemplary model of growth through investment in research and the protection of its heritage. The village, threatened by abandonment and depopulation, has, after 19 years of managing its two archaeological sites, increased its number of inhabitants, revitalised the area, generated international interest and, created human, cultural and emotional links with other municipalities in Spain. Galera decided to open its heritage to the public, and there is not a single inhabitant who has not participated at some point in the archaeological work, sharing the dust of the ground and the inclemency of the sun with Iberian and Argaric scholars and experts from all over the world for years. Nationals and foreigners from all cultures, eager for knowledge, have found nourishment in the archaeological finds and in the close relationships with the local people who documented them with stories, songs and customs that they often shared as guests at the table in their homes. Living together experiences, spaces, values, work and leisure while investigating the past, has served to shape an economic model for the future, respectful, circular and sustainable, where people come first. The researchers left their mark and took away unique experiences, such as that of living in a house dug out of the rock, built by hands that did not know about architectural universities, but were full of popular wisdom. Moreover, it has been organised theatrical performances in the excavations in which children played the role of men and women of the Argaric culture, encouraging them to investigate and awakening their curiosity. The generation that took part in the 1960s excavations set themselves up as guardians of the treasure against the looters and some of the village children ended up studying geology and archaeology. Since the 1960s, archaeological excavations have continued uninterrupted with the constant participation of the people of the village. 1.5 km from the town of Galera we find Castellón Alto, a Bronze Age site of the Argaric culture, which preserves all the urban planning of a medium-sized settlement. The second oldest adult and child mummy in Europe were found on this site, perfectly preserved. A few kilometres from Galera it is possible to visit the Iberian Necropolis of Tútugi, which contains remains from the 5th to 3rd centuries BC. To the excavations of the Necropolis of Tútugi we owe one of the most important finds of the Iberian world: the Goddess of Galera and valuable information about the rituals of the Iberian world and its culture. Part of these two sites and their remains have been digitised in 3D and models are available to researchers</p>	

	and citizens from all over the world who want to get to know the value of the area. These sites, among the most spectacular in Andalusia, have consolidated the area as one of the most attractive archaeological regions in Europe. In fact, they form part of the "Route of the First Settlers of Europe", as their remains show that this was one of the first inhabited territories in Europe. The Junta de Andalucía has declared the area a Geopark of Granada with the deposits of Galera as the centrepiece.
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • https://www.carare.eu/en/news/galera-cultural-heritage-as-a-model-for-growth/ • https://en.unesco.org/global-geoparks/granada
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i>, 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf.</p> <p>Council of Europe, <i>Convention for the Protection of the Archaeological Heritage of Europe</i>, The Valletta Convention, 1992, https://www.coe.int/en/web/culture-and-heritage/valletta-convention.</p> <p>ICOMOS, <i>Salalah Guidelines for the Management of Public Archaeological Sites</i>, 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a363f8c4662b.pdf.</p>
Keywords <i>transversal tags among different fields of research (add text)</i>	<p>Archaeological sites</p> <p>Conservation</p> <p>Preservation</p> <p>Valorisation</p>

Image/s of the best practice

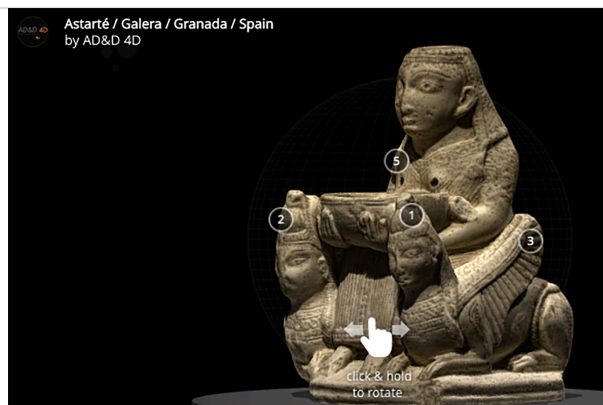
nr. 1/3 image/s to identify the type of best practice



<https://www.carare.eu/en/news/galera-cultural-heritage-as-a-model-for-growth/>



<https://www.carare.eu/en/news/galera-cultural-heritage-as-a-model-for-growth/>



<https://www.carare.eu/en/news/galera-cultural-heritage-as-a-model-for-growth/>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Granada
		Address	Galera
		Country	Spain
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
		Underground	
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Village
		Century	
		Start year	
		End year	
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Event	
		Actor	
		Century	
		Start year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	Social activities for the village
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
OTHER	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_038

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses</i>	Galera		
	Castellón Alto		
	Necropolis of Tútugi		
	Geopark of Granada		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials		
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites		
	Vegetable, mineral and animal fibres		
	Wood		
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	3D models		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Associations, NGOs and local communities aiming at maintaining and communicating cultural heritage Professional researchers General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Documentation of CH
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>	
	TRANSFERABILITY	<i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of</i>	

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Studies on CH; Management and administration practices; Organisation of events and festivals; Encounters with communities
Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives		
	Application of new technologies		
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how		
	Digitalisation		
	Encouraging and supporting the development of networks		
	Encouraging creative industries' involvement in CH domains		
	Implementing measures to encourage people to practice heritage		
	Mapping and analysis of users' needs and requirements		
	Organisation and logistics of complex situations (management of means and resources)		
	Social media		
	Sustainable management of Cultural Heritage		
	Taking care of Cultural Heritage materials		
	Training and educational activities		

4. SYNTHESIS SHEET




BP_038

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in			
				Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
							ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research				
•	•	•	Studies on CH				Skills on implementing measures to encourage people to practice heritage
•	•	•	Documentation of CH	Skills on digitalisation			
•	•	•	Communication of CH				
•	•	•	Preventive conservation				
•	•	•	Diagnostic activities				
•	•	•	Identification of the risks and deterioration patterns				
•	•	•	Materials conservation tests				
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials				
•	•	•	Reinforcement of CH buildings				
•	•	•	Monitoring				
•	•	•	Maintenance practices				
•	•	•	Management and administration practices				Skills on implementing measures to encourage people to practice heritage
•	•	•	Promotion and support of interventions for conservation				
•	•	•	Project of restoration				
•	•	•	Reconstruction				
•	•	•	Adaptive re-use of CH				
•	•	•	Accessibility				
•	•	•	Dissemination through publications				
•	•	•	Organisation of events and festivals				Skills on implementing measures to encourage people to practice heritage
•	•	•	Encounters with communities				Skills on implementing measures to encourage people to practice heritage
•	•	•	Educational activities and programmes				
•	•	•	Creation of partnership and networking			Skills on encouraging and supporting the development of networks	
•	•	•	Advertisements with CH				
•	•	•	Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_039
Best practice ref. <i>identification code (add text)</i>	BP_039	
Object <i>object of the case study (add text)</i>	Matadero, Madrid, Spain	
Intervention <i>subject of the case study (add text)</i>	Relationship between old and new in a former slaughterhouse	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	2006
	End date	2017
Actors <i>main actors involved (add text)</i>	Arch. Arturo Franco, Arch. Fabrice van Teslaar	
Description of the best practice <i>Brief abstract (add text)</i>	<p>Conducted as part of a wider intervention carried out between 2006 and 2011, the pilot restoration project carried out between 2006 and 2007, by architects Arturo Franco and Fabrice van Teslaar, of the hall 17c of the former slaughterhouse in Madrid was born as part of a programme promoted by the City Council to convert the complex into a cultural centre for artistic events. Specifically, it promotes contemporary creations through a programme of grants and initiatives that combine artistic production and citizen participation. The intervention established a dialogue between old and new. The designers worked on the theme of restoration as respect for the ruin as a material proof of memories of the past, enhancing its values, maximising the conservation of existing, adding punctual integrations and making the structure safe. All the vestiges of the past remain visible, including the residue of cork insulation which recalls the former use as cold storage, as well as evidence of repair work, for example, of the columns. Missing portions of walls were left untouched, as if they had just been jackhammered; ducts and wiring are surface mounted and remain visible. These interventions are clearly legible. To this end they employed materials typically used in industrial settings, off-the-shelf, without further processing. A large steel sliding door in an exterior wall of the compound points the way, via a gently inclined steel ramp and then through a steel sliding door, to the foyer. Here a long counter, made of welded steel plate, dominates a space otherwise almost completely untouched. An office and the sanitary facilities are situated behind the counter, both also clad in steel plate. Polished concrete was selected as floor material and in the adjacent multi-purpose halls. A glass box in a long room along southwest façade contains the only climatized space. Sectional steel, primarily in the form of steel channels, is used here in a variety of ways: as floor material, both standard and in raised flooring, and as profiles to hold glazing in place.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none"> • <i>Centre for Contemporary Culture in a Former Slaughterhouse in Madrid</i>, in "Detail", 11, 2009, pp. 1200-1205. • Franco A., <i>Exploring the limits</i>, in "Domus", 908, 2007, pp. 12-19. • <i>Riconversione di un mattatoio in centro culturale a Madrid. Nave 16 Matadero, Madrid, Spain</i>, Spagna, in "L'industria delle costruzioni", 429, 2013, pp. 96-101. • https://www.mataderomadrid.org • https://www.esmadrid.com/it/informazioni-turistiche/matadero-madrid 	
Documental references	CH general criteria framework (common framework, documents, CH)	

(add text)	ICOMOS-TICCIH, <i>The Nizhny Tagil Charter for the Industrial Heritage</i> , 2003, https://www.icomos.org/18thapril/2006/nizhny-tagil-charter-e.pdf .
	ICOMOS-TICCIH, <i>Joint ICOMOS-TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes</i> , Dublin Principles, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_d251c1dbc22a4210a5d893cf058f8c41.pdf .

Keywords <i>transversal tags among different fields of research</i> (add text)	Industrial archaeology assets
	Conservation
	Preservation
	Valorisation

Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>		"Domus", 908, 2007, p. 19.
		"Detail", 11, 2009, p. 1204.
		"Detail", 11, 2009, p. 1200.

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Madrid
		Address	Pl. de Legazpi 8
		Country	Spain
		Continent	Europe (European Union)
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	
	Slaughterhouses		

CHARACTERISATION OF THE HERITAGE ASSET <i>(the main characteristics of the heritage asset)</i>	Function <i>significant uses of the heritage asset</i> <i>(add text)</i>	Function Century Start year End year	Slaughterhouse 20th century 1925 1996	
	Time period <i>(select from list)</i>	Ancient period		
	Temporal <i>significant events in the history of the heritage asset</i> <i>(add text)</i>	Post industrial revolution period		
		Event	Realisation	
		Actor	Luis Bellido	
		Century	20th century	
		Start year	1910	
		End year	1925	
		Event	Closure of the complex	
		Actor		
		Century	20th century	
		Start year	1996	
	End year	1996		
	OTHER	Investigation status <i>(select from list)</i>	Un-documented Archived Studied	
		Immaterial aspects <i>connection to immaterial aspects</i> <i>(select from list)</i> <i>(add text)</i>	Architectural typology	Industrial archaeology asset
Artisanship				
Authorship				
Knowledge/ideas				
Performance				
Rituals/festivals/folklore/ceremonies				
Social activities/practices				
Traditional arts				
Traditional communication means				
Traditional construction systems				
Traditional craftsmanship				
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)				

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT <i>(the main characteristics of the heritage artefact)</i>	Type <i>(of the artefact asset)</i> <i>(select from list)</i>	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period <i>(select from list)</i>	Ancient period Post industrial revolution period	
Temporal <i>significant events in the history of the</i>	Event		
	Actor		
	Century		

	<i>heritage artefact</i> <i>(add text)</i>	Start year	
		End year	
OTHER	Investigation status <i>(select from list)</i>	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	
		Recorded	
	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Artefact typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)			

3. CHARACTERISATION OF THE BEST PRACTICE

BP_039

Type of best practice <i>(select from list)</i>	Conservation	
	Preservation	
	Valorisation	
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Matadero	
	Hall 17c	
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials	
	Ceramic materials	Bricks
	Concrete	Concrete
	Concrete derivatives	
	Glass materials	Glass
	Metal materials	Steel
	Paints, varnishes and enamels	
	Plasters	Plaster
	Polymeric materials	
	Marbles, travertines, stones and granites	
	Vegetable, mineral and animal fibres	
	Wood	
	Wood derivatives	Cork
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2 (add text)</i>	Natural risks (biological)
Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3 (add text)</i>	—	
Users need <i>response by the best practice, if relevant - link to T1.4 (add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration	
	Companies from the creative industry producing heritage-based content, apps, games, education and tourism services	
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable
		Pre-consolidation, cleaning, consolidation and protection of CH materials; Project of restoration; Adaptive re-use of CH

		<i>strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Organisation of events and festivals; Creation of partnership and networking
Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives		
	Application of new technologies		
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how		
	Digitalisation		
	Encouraging and supporting the development of networks		
	Encouraging creative industries' involvement in CH domains		
	Implementing measures to encourage people to practice heritage		
	Mapping and analysis of users' needs and requirements		
	Organisation and logistics of complex situations (management of means and resources)		
	Social media		
	Sustainable management of Cultural Heritage		
	Taking care of Cultural Heritage materials		
	Training and educational activities		

4. SYNTHESIS SHEET

BP_039

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials		Skills on taking care of Cultural Heritage materials		
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration		Skills on organisation and logistics of complex situations (management of means and resources)		
			• Reconstruction				
			• Adaptive re-use of CH		Skills on implementing measures to encourage people to practice heritage		
			• Accessibility				
			• Dissemination through publications				
			• Organisation of events and festivals				Skills on implementing measures to encourage people to practice heritage
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				Skills on implementing measures to encourage people to practice heritage
			• Advertisements with CH				
			• Gaming with CH				

1. CASE STUDY (INTRODUCTION)		BP_040
Best practice ref. <i>identification code (add text)</i>	BP_040	
Object <i>object of the case study (add text)</i>	Shelter for Roman Ruins, Chur, Switzerland	
Intervention <i>subject of the case study (add text)</i>	Protection and valorisation of Roman ruins	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study (add text)</i>	Century	21st century
	Start date	1985
	End date	1986
Actors <i>main actors involved (add text)</i>	Atelier Peter Zumthor & Partner AG	
Description of the best practice <i>Brief abstract (add text)</i>	<p>The Shelter for Roman Ruins in Chur is a protective housing for the remains of the foundations of two Roman buildings, and a third building of which only a corner is visible. This museum allows the excavations to be protected and visited. The new protective casing for the archaeological finds (Roman buildings and artefacts) was conceived as a kind of abstract reconstruction of the Roman volumes: a lightweight framework of walls, made of timber lamella which admit light and air, exactly follows the Roman outer walls, thus producing a package-like effect which gives a visible form to the location of the Roman buildings in today's city landscape. The spaces inside the shell refer to Roman interiors. The treatment of the entrances represents a play on the relationship between history and the present: the Roman entrances, discernible as projecting sections of wall, are encased in peepshow-like constructions which afford a glimpse into the interior. However, the building is accessed by a modern steel footbridge which runs the length of the buildings at a raised, a-historical observation level. The visitor walks along a path through dark connecting tunnels from one spatial unit to another, and down some steps to the excavation level, the Roman soil. The Roman walls are backed by black cloths, and mellow zenithal light enters through black skylights. Inside the building, the sounds of the town penetrate the lamella structure of the walls. In 2020, Peter Zumthor received the Cultural Award of the City of Chur.</p>	
Bibliography and sitography <i>main sources referred to the best practice (add text)</i>	<ul style="list-style-type: none">• https://www.atlasofplaces.com/architecture/shelter-roman-archaeological-site/• https://arch3281fall14.files.wordpress.com/2014/10/casestudybooklet_templplate.pdf• https://www.archdaily.com/884003/explore-peter-zumthors-1986-shelter-for-roman-ruins-in-quiet-solitude• https://divisare.com/projects/397572-peter-zumthor-august-fischer-shelter-for-roman-ruins• https://www.abitare.it/it/architettura/2009/04/17/impassibileincandescente/• http://architettura.it/sopralluoghi/19990901/index.htm• https://www.cdt.ch/cultura-e-societa/premio-culturale-della-citta-di-coira-a-zumthor-IC3433082?refresh=true	
Documental references <i>(add text)</i>	<p>CH general criteria framework (common framework, documents, CH)</p> <p>ICOMOS, <i>Charter for the Protection and Management of the Archaeological Heritage</i>, 1990, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_fdf09c5b303f4fa09a283992ae16bcb8.pdf.</p>	

Council of Europe, *Convention for the Protection of the Archaeological Heritage of Europe*, The Valletta Convention, 1992, <https://www.coe.int/en/web/culture-and-heritage/valletta-convention>.

ICOMOS, *Salalah Guidelines for the Management of Public Archaeological Sites*, 2017, https://www.icomositalia.com/_files/ugd/57365b_36589194d828402e9380a363f8c4662b.pdf.

Keywords	Archaeological sites
<i>transversal tags among different fields</i>	Conservation
<i>of research</i>	Preservation
<i>(add text)</i>	Valorisation

Image/s of the best practice
nr. 1/3 image/s to identify the type of best practice

<https://www.atlasofplaces.com/architecture/shelter-roman-archaeological-site/>

<https://www.atlasofplaces.com/architecture/shelter-roman-archaeological-site/>

<https://www.atlasofplaces.com/architecture/shelter-roman-archaeological-site/>

<https://www.atlasofplaces.com/architecture/shelter-roman-archaeological-site/>

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location</i> (add text)	Place name	Altenburg
		Address	Abt-Placidus-Much-Straße 1
		Country	Austria
		Continent	Europe
	Environment (select from list)	Urban	
		Rural	
		Coastal	
		Natural	
	Location (select from list)	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale (select from list)	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) (select from list)	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) (select from list)	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	Roman buildings
	Time period (select from list)	Century	Roman period
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year	
		End year	
		Ancient period	
		Post industrial revolution period	
		Event	Realisation
		Actor	
		Century	Roman period
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Archived	
		Studied	
		Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	Roman construction systems
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Post industrial revolution period	
		Event	Realisation
		Actor	
		Century	Roman period
		Start year	
		End year	
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Preserved
		Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_040

Type of best practice <i>(select from list)</i>	Conservation		
	Preservation		
	Valorisation		
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	Roman buildings		
	Roman artefacts		
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials		
	Ceramic materials		
	Concrete		
	Concrete derivatives		
	Glass materials		
	Metal materials	Steel	
	Paints, varnishes and enamels		
	Plasters		
	Polymeric materials		
	Marbles, travertines, stones and granites	Stone	
	Vegetable, mineral and animal fibres		
	Wood	Wood	
	Wood derivatives		
Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	Anthropic risks (heritage management)		
Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	—		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Professionals and SMEs providing services for preservation, conservation and restoration General and educational users and visitors, tourists		
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)	
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of	Project of restoration; Accessibility

		<i>standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities



4. SYNTHESIS SHEET

BP_040

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES
			Activities				
			• Historic and bibliographic research				
			• Studies on CH				
			• Documentation of CH				
			• Communication of CH				
			• Preventive conservation				
			• Diagnostic activities				
			• Identification of the risks and deterioration patterns				
			• Materials conservation tests				
			• Pre-consolidation, cleaning, consolidation and protection of CH materials				
			• Reinforcement of CH buildings				
			• Monitoring				
			• Maintenance practices				
			• Management and administration practices				
			• Promotion and support of interventions for conservation				
			• Project of restoration			Skills on organisation and logistics of complex situations (management of means and resources)	
			• Reconstruction				
			• Adaptive re-use of CH				
			• Accessibility			Skills on implementing measures to encourage people to practice heritage	
			• Dissemination through publications				
			• Organisation of events and festivals				
			• Encounters with communities				
			• Educational activities and programmes				
			• Creation of partnership and networking				
			• Advertisements with CH				
			• Gaming with CH				

	<p>Vv.Aa., <i>Noto Charter</i>, 1986, https://ipce.culturaydeporte.gob.es/dam/jcr:c985ba29-4817-442b-8cde-e2a490140936/1986-carta-de-noto.pdf.</p> <p>ICOMOS, <i>Charter for the Conservation of Historic Towns and Urban Areas</i>, Washington Charter, 1987, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_012ee3b47bea4183b8a7d344d1bcd340.pdf.</p> <p>ICOMOS, <i>The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas</i>, 2011, https://5129c385-3847-464f-90f1-46e3571d8ee3.filesusr.com/ugd/57365b_b4260164b6a74386a9bc53253775bb98.pdf.</p> <p>UNESCO, <i>Recommendation on the Historic Urban Landscape</i>, 2011, https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf.</p> <p>Vv.Aa., <i>Urban Agenda for the EU</i>, Pact of Amsterdam, 2016, https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf.</p> <p>UNESCO, <i>The UNESCO Recommendation on the Historic Urban Landscape</i>, 2019, https://whc.unesco.org/en/hul/.</p>
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Keywords <i>transversal tags among different fields of research (add text)</i>	Urban spaces/assets Conservation Valorisation
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Image/s of the best practice <i>nr. 1/3 image/s to identify the type of best practice</i>	 <p>https://www.standard.co.uk/news/london/streetmuseum-app-creates-a-stunning-picture-of-you-in-a-london-scene-from-a-bygone-era-9153842.html</p>
	 <p>https://www.standard.co.uk/news/london/streetmuseum-app-creates-a-stunning-picture-of-you-in-a-london-scene-from-a-bygone-era-9153842.html</p>



<https://www.standard.co.uk/news/london/streetmuseum-app-creates-a-stunning-picture-of-you-in-a-london-scene-from-a-bygone-era-9153842.html>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	London
		Address	
		Country	United Kingdom
		Continent	Europe (outside the European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
Underground			
Cave			
Find spot			
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
	Vernacular		
	Watermanagement systems	(canals, dams, irrigation, etc.)	
	Cities		

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function	City
	Time period (select from list)	Century	
		Start year	
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	End year	
		Ancient period	
		Post industrial revolution period	
		Event	Pictures dates
		Actor	Streetmuseum
		Century	19th-21st century
		Start year	1863
		End year	2003
OTHER	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology	
		Artisanship	
		Authorship	
		Knowledge/ideas	
		Performance	
		Rituals/festivals/folklore/ceremonies	
		Social activities/practices	
		Traditional arts	
		Traditional communication means	
		Traditional construction systems	
		Traditional craftsmanship	
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)	Memory of the past

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
	Time period (select from list)	Digital	Art
			Virtual reality
		Ancient period	
		Post industrial revolution period	
		Event	
OTHER	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Actor	
		Century	
		Start year	
		End year	
		Investigation status (select from list)	
		Un-documented	
OTHER		Archived	
		Studied	
		Exhibited	
		Preserved	

OTHER	Immaterial aspects connection to immaterial aspects (select from list)	Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_041

Type of best practice <i>(select from list)</i>	Conservation			
	Preservation			
	Valorisation			
Main component or aspect <i>main component or aspect of the heritage asset on which the best practice focuses (add text)</i>	City			
	Buildings			
	Streets			
Materials <i>materials on which the best practice focuses, if applicable</i> <i>(select from list)</i> <i>(add text)</i>	Bituminous materials			
	Ceramic materials			
	Concrete			
	Concrete derivatives			
	Glass materials			
	Metal materials			
	Paints, varnishes and enamels			
	Plasters			
	Polymeric materials			
	Marbles, travertines, stones and granites			
	Vegetable, mineral and animal fibres			
	Wood			
	Wood derivatives			
	Type of risk <i>the reason for the intervention, if relevant - link to T1.2</i> <i>(add text)</i>	—		
	Technologies <i>Technologies for the diagnosis, if relevant - link to T1.3</i> <i>(add text)</i>	App GPS		
Users need <i>response by the best practice, if relevant - link to T1.4</i> <i>(add text)</i>	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Companies from the creative industry producing heritage-based content, apps, games, education and tourism services General and educational users and visitors, tourists			
Relevance of the best practice <i>main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice</i> <i>(select from list)</i> <i>(add text)</i>	DIGITAL INNOVATION	<i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i>	Communication of CH; Reconstruction	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	<i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i>		
	TRANSFERABILITY	<i>(i.e. provision of training/upskilling for traditional and new profession, guidelines for data acquisition, management and</i>		

		<i>storage, catalogue of standards, replicable strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_041

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices				
			Activities	DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research					
•	•	•	Studies on CH					
•	•	•	Documentation of CH	Skills on digitalisation				
•	•	•	Communication of CH					
•	•	•	Preventive conservation					
•	•	•	Diagnostic activities					
•	•	•	Identification of the risks and deterioration patterns					
•	•	•	Materials conservation tests					
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials					
•	•	•	Reinforcement of CH buildings					
•	•	•	Monitoring					
•	•	•	Maintenance practices					
•	•	•	Management and administration practices					
•	•	•	Promotion and support of interventions for conservation					
•	•	•	Project of restoration					
•	•	•	Reconstruction	Skills on digitalisation				
•	•	•	Adaptive re-use of CH					
•	•	•	Accessibility					
•	•	•	Dissemination through publications					
•	•	•	Organisation of events and festivals					
•	•	•	Encounters with communities					
•	•	•	Educational activities and programmes					
•	•	•	Creation of partnership and networking					
•	•	•	Advertisements with CH					
•	•	•	Gaming with CH					

1. CASE STUDY (INTRODUCTION)		BP_042
Best practice ref. <i>identification code</i> (add text)	BP_042	
Object <i>object of the case study</i> (add text)	THE LOST PALACE, LONDON, UNITED KINGDOM	
Intervention <i>subject of the case study</i> (add text)	Sound experience of the past	
Temporal <i>time period of the intervention, referred to the actions/activities of the case study</i> (add text)	Century	21st century
	Start date	2015
	End date	On-going
Actors <i>main actors involved</i> (add text)	Royal Palaces, design studio Chomko & Rosier, theatre company Uninvited Guests (with sound artist Lewis Gibson), software developers Calvium Ltd	
Description of the best practice <i>Brief abstract</i> (add text)	<p>Until it was destroyed by fire in 1698, the Whitehall Palace was the largest royal residence in Europe. Some of the most significant, defining moments in British history took place here. To bring this rich history to life Historic Royal Palaces launched an open call competition in 2015, for artists, creatives and technologists to create an immersive storytelling experience. It asked for creative responses to the project's brief and distributed to the widest possible range of creative industries. From these, five were selected to create working prototypes that were tested on real family and adult audiences. The creators of the most successful prototypes - Chomko & Rosier, Uninvited Guests and Calvium Ltd - were then asked to collaborate on creating the full visitor experience. This full version was created using iterative, user-centred-design principles with over 15 rounds of user testing, and a final full public scratch test ahead of launch. In order to realise the ambitions for this project, it has been worked with different types of partners, moving away from a traditional commissioning model to an R&D based approach. Also key was extensive stakeholder work with security partners around Whitehall, the most security sensitive street in the UK. The Lost Palace allows to explore the largest palace in Europe 300 years after it burnt to the ground with a unique combination of immersive audio theatre, interactive technology, architectural installations and live performance. It takes visitors through modern streets to the exact places where Whitehall Palace's most remarkable history happened, and enables them to hear, touch and feel the past. The technology that powers The Lost Palace is a bespoke hardware and software system that uses NFC, GPS, haptics, accelerometer, gyroscope and compass. However, all this technology is hidden within a wooden object, and completely free of screens. Removing this interface and making the triggers for the digital content either human actions or interactions between organic physical objects, means focus is on spaces and characters, and imagination is free to engage with the stories in meaningful and memorable ways. Based on this, the Lost Palace created a series of moments which combined a physical location, a historic story and a tech interaction in order to cast the visitor as present in the specific event, as a contemporary to the characters, and as an active participant in the action. The effect of this was the creation of a rich virtual reality, but a non-visual one. They augmented reality, not with CGI visuals but with an experiential layer of history. The following design choices were key to this world creation: use of binaural sound</p>	

	to create immersive 3D sound worlds; use of multisensory technology (especially haptics to utilise sense of touch) to create visceral experiences; gestural recognition to make physical actions in the contemporary world have implications in the virtual historic world; and giving real agency to the visitor, so everyone had a different, personalised experience. The Lost Palace won the Museums + Heritage Award for Innovation in 2017.
Bibliography and sitography <i>main sources referred to the best practice</i> (add text)	<ul style="list-style-type: none"> • https://www.museumnext.com/article/new-immersive-heritage-experience-lost-palace/ • https://heritageinmotion.eu/himentry/slug-b8d95e6193daf8032ca31da893c3e59b • https://calvium.com/projects/the-lost-palace/ • https://advisor.museumsandheritage.com/features/lost-palace-ii-return-historic-royal-palaces-vr-sensation/ • https://www.timeout.com/london/attractions/the-lost-palace
Documental references (add text)	<p>UNESCO, <i>Convention for the Safeguarding of the Intangible Cultural Heritage</i>, 2003, http://unesdoc.unesco.org/images/0013/001325/132540e.pdf.</p> <p>UNESCO, <i>Convention for the Safeguarding of the Intangible Cultural Heritage</i>, 2011, https://ich.unesco.org/doc/src/15164-EN.pdf.</p>
Keywords <i>transversal tags among different fields of research</i> (add text)	<p>Intangible Heritage</p> <p>Valorisation</p>

Image/s of the best practice
 nr. 1/3 image/s to identify the type of
 best practice



<https://calvium.com/projects/the-lost-palace/>



<https://heritageinmotion.eu/himentry/slug-b8d95e6193daf8032ca31da893c3e59b>



<https://heritageinmotion.eu/himentry/slug-b8d95e6193daf8032ca31da893c3e59b>

4CH Competence Centre for the Conservation of Cultural Heritage
D1.3 Final survey of the experiences and technology state of the art

Cultural Heritage Type			
MONUMENTS / GROUPS OF BUILDINGS / SITES (AND LANDSCAPE)			
SPATIAL INFORMATION (the location of the heritage asset)	Named location <i>reference to Geonames to capture the location (add text)</i>	Place name	London
		Address	Westminster
		Country	United Kingdom
		Continent	Europe (outside the European Union)
	Environment <i>(select from list)</i>	Urban	
		Rural	
		Coastal	
		Natural	
	Location <i>(select from list)</i>	On ground	
		Underwater/maritime	
		Underground	
		Cave	
		Find spot	
CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Structure/scale <i>(select from list)</i>	Stand-alone / individual	
		Group	
		Complex	
		Settlement	
		Landscape	
		Route	
	Type A (of the heritage asset) <i>(select from list)</i>	Built	
		Carved	
		Natural	
		Earthworks	
		Open surface	
	Type B (of the heritage asset) <i>(select from list)</i>	Agricultural	(farms, vineyards, canals, etc.)
		Burial	(mounds, cemeteries, mausolea, tombs, etc.)
		Commercial	(passages, markets, etc.)
		Cultural	(libraries, archives, etc.)
		Cultural Landscape	
		Dwellings	(villas, palaces, houses, etc.)
		Educational	
		Expositive	(museums, galleries, etc.)
		Gardens and Parks	
		Health and Welfare	(hospitals, spas, etc.)
		Industrial and Technological	(factories, power plants, etc.)
		Infrastructure and Maritime	(stations, ports, canals, roads, railways, etc.)
		Military and defensive	(castles, forts, battlefields, etc.)
		Mining	(mines, etc.)
		Other, Public	(law courts, city hall, etc.)
		Performing	(theatres, etc.)
		Religious and ritual	(churches, monasteries, temples, etc.)
		Routes	(trading, pilgrimage, etc.)
		Settlement	(towns, town centres, villages, etc.)
		Symbolic and Memorial	(monuments, plates, etc.)
		Vernacular	
		Watermanagement systems	(canals, dams, irrigation, etc.)

CHARACTERISATION OF THE HERITAGE ASSET (the main characteristics of the heritage asset)	Function <i>significant uses of the heritage asset</i> (add text)	Function Royal residence
	Time period (select from list)	Century 11th-17th century
	Temporal <i>significant events in the history of the heritage asset</i> (add text)	Start year 1049
		End year 1698
		Ancient period
		Post industrial revolution period
		Event Burnt to the ground
		Actor
		Century 17th century
		Start year 1698
OTHER	Investigation status (select from list)	Un-documented
		Archived
		Studied
	Immaterial aspects <i>connection to immaterial aspects</i> (select from list) (add text)	Architectural typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.) Burning to the ground

Cultural Heritage Type			
ARTEFACTS (particular consideration for, if relevant)			
CHARACTERISATION OF THE HERITAGE ARTEFACT (the main characteristics of the heritage artefact)	Type (of the artefact asset) (select from list)	Movable	Architectonic features
			Art works
			Eco-facts
			Ethnographic
			Historic replica
			Utilitarian
			Written evidences
		Immovable	Carved
			Frescoes
			Graffiti
			Mosaics
		Digital	Art
			Virtual reality
	Time period (select from list)	Ancient period	
		Post industrial revolution period	
OTHER	Temporal <i>significant events in the history of the heritage artefact</i> (add text)	Event	
		Actor	
		Century	
		Start year	
		End year	
	Investigation status (select from list)	Un-documented	
		Archived	
		Studied	
		Exhibited	
		Preserved	

	Immaterial aspects <i>connection to</i> <i>immaterial aspects</i> <i>(select from list)</i>	Recorded
		Artefact typology
		Artisanship
		Authorship
		Knowledge/ideas
		Performance
		Rituals/festivals/folklore/ceremonies
		Social activities/practices
		Traditional arts
		Traditional communication means
		Traditional construction systems
		Traditional craftsmanship
		Value (spiritual/sacred, beliefs, individuals, events, symbolic, etc.)

3. CHARACTERISATION OF THE BEST PRACTICE

BP_042

Type of best practice (select from list)	Conservation			
	Preservation			
	Valorisation			
Main component or aspect main component or aspect of the heritage asset on which the best practice focuses (add text)	Immaterial dimension of the lost palace			
Materials materials on which the best practice focuses, if applicable (select from list) (add text)	Bituminous materials			
	Ceramic materials			
	Concrete			
	Concrete derivatives			
	Glass materials			
	Metal materials			
	Paints, varnishes and enamels			
	Plasters			
	Polymeric materials			
	Marbles, travertines, stones and granites			
	Vegetable, mineral and animal fibres			
	Wood			
	Wood derivatives			
	Type of risk the reason for the intervention, if relevant - link to T1.2 (add text)	—		
	Technologies Technologies for the diagnosis, if relevant - link to T1.3 (add text)	Hardware and software system that uses NFC, GPS, haptics, accelerometer, gyroscope and compass		
Users need response by the best practice, if relevant - link to T1.4 (add text)	Decision-makers and national public bodies (i.e. ministries) promoting policies and strategies for conservation, preservation and digitization Companies from the creative industry producing heritage-based content, apps, games, education and tourism services General and educational users and visitors, tourists			
Relevance of the best practice main focuses, fields of relevance, relevant fields to the specific best practice and reasons that make the case study a best practice (select from list) (add text)	DIGITAL INNOVATION	(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)	Communication of CH; Reconstruction	
	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)		
	TRANSFERABILITY	(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable)		

		<i>strategies)</i>	
	POLICIES AND GOVERNANCE STRATEGIES	<i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i>	Creation of partnership and networking
	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	<i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	Communication of CH

Skills (on) <i>main skills highlighted by the best practice</i> <i>(select from list)</i> <i>(add text)</i>	Achievement of environmental challenges and objectives
	Application of new technologies
	Developing knowledge banks on Cultural Heritage materials, techniques and know-how
	Digitalisation
	Encouraging and supporting the development of networks
	Encouraging creative industries' involvement in CH domains
	Implementing measures to encourage people to practice heritage
	Mapping and analysis of users' needs and requirements
	Organisation and logistics of complex situations (management of means and resources)
	Social media
	Sustainable management of Cultural Heritage
	Taking care of Cultural Heritage materials
	Training and educational activities

4. SYNTHESIS SHEET

BP_042

Conservation	Preservation	Valorisation	(select from list) (add text)	Area of effectiveness in Conservation, Preservation and Valorisation practices			
			Activities	DIGITAL INNOVATION DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION	
•	•	•	Historic and bibliographic research				
•	•	•	Studies on CH				
•	•	•	Documentation of CH				
•	•	•	Communication of CH	Skills on application of new technologies		Skills on implementing measures to encourage people to practice heritage	
•	•	•	Preventive conservation				
•	•	•	Diagnostic activities				
•	•	•	Identification of the risks and deterioration patterns				
•	•	•	Materials conservation tests				
•	•	•	Pre-consolidation, cleaning, consolidation and protection of CH materials				
•	•	•	Reinforcement of CH buildings				
•	•	•	Monitoring				
•	•	•	Maintenance practices				
•	•	•	Management and administration practices				
•	•	•	Promotion and support of interventions for conservation				
•	•	•	Project of restoration				
•	•	•	Reconstruction	Skills on application of new technologies			
•	•	•	Adaptive re-use of CH				
•	•	•	Accessibility				
•	•	•	Dissemination through publications				
•	•	•	Organisation of events and festivals				
•	•	•	Encounters with communities				
•	•	•	Educational activities and programmes				
•	•	•	Creation of partnership and networking		Skills on encouraging and supporting the development of networks		
•	•	•	Advertisements with CH				
•	•	•	Gaming with CH				

Appendix 3 – Common framework – Best practices

Conservation	Preservation	Valorisation	Activities	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•	•	Historic and bibliographic research	BP_007; BP_028		BP_008		
•	•	•	Studies on CH	BP_007; BP_028		BP_008; BP_035		BP_038
•	•	•	Documentation of CH	BP_002; BP_005; BP_007; BP_012; BP_026; BP_028; BP_038		BP_015		
•	•	•	Communication of CH	BP_005; BP_007; BP_011; BP_012; BP_021; BP_026; BP_028; BP_041	BP_011; BP_042	BP_011; BP_017	BP_012; BP_026	BP_007; BP_018; BP_027; BP_042
•	•		Preventive conservation		BP_023	BP_022; BP_023; BP_033		
•	•		Diagnostic activities		BP_035	BP_001; BP_008; BP_022; BP_033; BP_037		
•	•		Identification of the risks and deterioration patterns			BP_019; BP_020; BP_022; BP_033; BP_037		
•	•		Materials conservation tests			BP_019; BP_020; BP_022		
•	•		Pre-consolidation, cleaning, consolidation and protection of CH materials		BP_014	BP_001; BP_003; BP_008; BP_013; BP_016; BP_019; BP_020; BP_022; BP_029; BP_030; BP_032; BP_033; BP_034; BP_035; BP_037; BP_039		
•	•		Reinforcement of CH buildings			BP_001; BP_019; BP_034		
•	•		Monitoring	BP_006	BP_023; BP_033	BP_008; BP_020; BP_023	BP_011	
•	•		Maintenance practices		BP_014	BP_020; BP_022; BP_023; BP_033; BP_037		

Conservation	Preservation	Valorisation	Activities	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
•	•		Management and administration practices	BP_005; BP_006	BP_004; BP_032	BP_033	BP_010; BP_011	BP_038
•	•	•	Promotion and support of interventions for conservation		BP_004		BP_004; BP_010; BP_014	
•	•	•	Project of restoration		BP_009; BP_016; BP_019	BP_001; BP_008; BP_013; BP_014; BP_015; BP_016; BP_019; BP_026; BP_029; BP_030; BP_039; BP_040	BP_008	
•			Reconstruction	BP_002; BP_041	BP_042	BP_004; BP_013	BP_004	
	•	•	Adaptive re-use of CH		BP_014; BP_019; BP_027; BP_029; BP_032; BP_036	BP_001; BP_013; BP_014; BP_015; BP_025; BP_027; BP_029; BP_032; BP_033; BP_039		BP_027; BP_036
	•	•	Accessibility		BP_027	BP_001; BP_010; BP_013; BP_017; BP_022; BP_025; BP_027; BP_029; BP_033; BP_040		
		•	Dissemination through publications			BP_016; BP_029; BP_034; BP_035	BP_008; BP_033	
		•	Organisation of events and festivals	BP_022		BP_025	BP_010	BP_009; BP_011; BP_012; BP_022; BP_027; BP_032; BP_034; BP_037; BP_038; BP_039

Conservation	Preservation	Valorisation	Activities	Area of effectiveness in Conservation, Preservation and Valorisation practices				
				DIGITAL INNOVATION	DEVELOPMENT AND/OR EXPERIMENTATION OF TECHNIQUES AND METHODOLOGIES	TRANSFERABILITY	POLICIES AND GOVERNANCE STRATEGIES	ENGAGEMENT, EXPLOITATION AND SOCIAL INNOVATION
			<ul style="list-style-type: none"> Encounters with communities 					BP_006; BP_009; BP_010; BP_011; BP_024; BP_025; BP_026; BP_027; BP_033; BP_037; BP_038
			<ul style="list-style-type: none"> Educational activities and programmes 	BP_026		BP_017		BP_003; BP_009; BP_015; BP_018; BP_033; BP_034; BP_037
			<ul style="list-style-type: none"> Creation of partnership and networking 		BP_031	BP_004; BP_026; BP_031	BP_004; BP_005; BP_006; BP_007; BP_008; BP_010; BP_025; BP_027; BP_032; BP_033; BP_035; BP_038; BP_042	BP_024; BP_027; BP_039
			<ul style="list-style-type: none"> Advertisements with CH 		BP_031	BP_031		
			<ul style="list-style-type: none"> Gaming with CH 	BP_002; BP_021		BP_021		

Appendix 4 – Common framework – All sources

CONSERVATION		ASSET TYPE											
PURPOSE	SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
	Best Practices		BP_001; BP_007; BP_012; BP_019; BP_020; BP_022; BP_023; BP_026; BP_028; BP_030; BP_034; BP_035	BP_003; BP_029; BP_037	BP_009; BP_025; BP_039	BP_008; BP_014; BP_015; BP_018; BP_032; BP_033	BP_005; BP_010; BP_022; BP_038; BP_040	BP_004; BP_013; BP_016	BP_006; BP_011; BP_041	BP_022			

ASSET TYPE													
PURPOSE	SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
CONSERVATION	Documents	VVAA_1883; VVAA_1931; SCAFA_1932; ICOMOS_1964; UNESCO_1972; MPE_1972; ICOMOS_1975_a; ICOMOS_1975_b; A_ICOMOS_1979; A_ICOMOS_1981; CE_1985; A_ICOMOS_1987; CNR_1987; A_ICOMOS_1988; ICOMOS_1994; ENCRE_1997; A_ICOMOS_1988_a; A_ICOMOS_1988_b; A_ICOMOS_1988_c; A_ICOMOS_1988_d; CEC_1998; A_ICOMOS_1999; ICOMOS_1999_b; ICOMOS_1999_c; VVAA_2000; ECCO_2002; ICOMOS_2003_a; CE_2005; ICOMOS_2005; ICOMOS_2008_a; ICOMOS_ISCS_2008; ICOMOS_2008_c; EC_2010; VVAA_2011; ICOMOS_2011_b; ICOMOS_2011_c; EU_2012_a; EU_2012_b; UNESCO_ICCROM_ICOMOS_IUCN_2013; A_ICOMOS_2013; VVAA_2014_a; VVAA_2014_b; CEU_2014; EU_2014_b; ICOMOS_2014; CHCfE_2015_a; CHCfE_2015_b; ICOMOS_2015; EC_2015; EU_2015; UN_2016; ICOMOS_2017_a; VVAA_2017; EC_2017_a; EC_2017_b; ICOMOS_2017_c; ICOMOS_2017_d; EC_2018_a; EC_2018_b; EU_2018; ICOMOS_2018; VVAA_2019; EC_2019; UNESCO_2019_b; ICOMOS_2020; EC_2021_a; EC_2021_b	CH general criteria framework (common framework, conservation, documents, CH)	CH general criteria framework (common framework, conservation, documents, CH)	CH general criteria framework (common framework, conservation, documents, CH); ICOMO S_TICCI H_2003; ICOMO S_TICCI H_2011	CH general criteria framework (common framework, conservation, documents, CH); VVAA_1991; ICOMOS_1991; ISC20C_2011; GCI_2013; ICOMOS_1991; ISC20C_2014; ICOMOS_1991; ISC20C_2017	CH general criteria framework (common framework, conservation, documents, CH); ICOMOS_1990; CE_1992; ICOMOS_2017_b	CH general criteria framework (common framework, conservation, documents, CH); UNESCO_1954; VVAA_2010; UNESCO_2018	CH general criteria framework (common framework, conservation, documents, CH); VVAA_1960; VVAA_1986; ICOMOS_1987; ICOMOS_2011_a; UNESCO_2011_b; UNESCO_2019_a	CH general criteria framework (common framework, conservation, documents, CH); IFLA_2017_a; ICOMOS_1987; IFLA_2017_b	CH general criteria framework (common framework, conservation, documents, CH); ICOMO S_1996; UNESCO_2001	CH general criteria framework (common framework, conservation, documents, CH); ICOMO S_2003_b	UNESCO_2003; UNESCO_2011_a
		4CH Competence Centre for the Conservation of Cultural Heritage D Final survey of the experiences and technology state of the ar											

[illegible]

PRESERVATION		ASSET TYPE											
PURPOSE	SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
	Best Practices		BP_001; BP_007; BP_012; BP_019; BP_020; BP_022; BP_023; BP_026; BP_028; BP_030; BP_034; BP_035	BP_003; BP_029; BP_036; BP_037	BP_009; BP_025; BP_039	BP_008; BP_014; BP_015; BP_018; BP_032; BP_033	BP_005; BP_010; BP_022; BP_038; BP_040	BP_004; BP_013; BP_016	BP_006; BP_011	BP_022			

PURPOSE		ASSET TYPE											
SOURCE		Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
PRESERVATION	Documents	VVAA_1883; VVAA_1931; SCAFA_1932; ICOMOS_1964; UNESCO_1972; MPE_1972; ICOMOS_1975_a; ICOMOS_1975_b; VVAA_1978; A_ICOMOS_1979; A_ICOMOS_1981; A_ICOMOS_1987; CNR_1987; A_ICOMOS_1988_a; A_ICOMOS_1988_b; A_ICOMOS_1988_c; A_ICOMOS_1988_d; ICOMOS_1994; ENCRE_1997; A_ICOMOS_1998; CEC_1998; A_ICOMOS_1999; ICOMOS_1999_b; VVAA_2000; ECCO_2002; ICOMOS_2003_a; UNESCO_2005; ICOMOS_2005; ICOMOS_2008_a; ICOMOS_2008_c; EC_2010; VVAA_2011; ICOMOS_2011_b; ICOMOS_2011_c; EU_2012_a; EU_2012_b; UNESCO_ICCROM_ICOMOS_IUCN_2013; A_ICOMOS_2013; VVAA_2014_a; VVAA_2014_b; CEU_2014; EU_2014_b; ICOMOS_2014; CHCfE_2015_a; CHCfE_2015_b; ICOMOS_2015; EC_2015; EU_2015; UN_2016; ICOMOS_2017_a; VVAA_2017; EC_2017_a; EC_2017_b; ICOMOS_2017_c; ICOMOS_2017_d; EC_2018_a; EC_2018_b; VVAA_2018; EU_2018; ICOMOS_2018; VVAA_2019; EC_2019; UNESCO_2019_b; ICOMOS_2020; EC_2021_a; EC_2021_b	CH general criteria framework (common framework, preservation, documents, CH)	CH general criteria framework (common framework, preservation, documents, CH)	CH general criteria framework (common framework, preservation, documents, CH); ICOMOS_2003	CH general criteria framework (common framework, preservation, documents, CH); VVAA_1991; ICOMOS_ISC_20C_2011; GCI_2013; ICOMOS_ISC_20C_2014; ICOMOS_ISC_20C_2017	CH general criteria framework (common framework, preservation, documents, CH); ICOMOS_1990; CE_1992; ICOMOS_2017_b	CH general criteria framework (common framework, preservation, documents, CH); UNESCO_O_1954; VVAA_2010; UNESCO_O_2018	CH general criteria framework (common framework, preservation, documents, CH); ICOMOS_2011_a; UNESCO_2011_b; UNESCO_2019_a	CH general criteria framework (common framework, preservation, documents, CH); ICOMOS_1981; ICOMOS_IFLA_2017_a; ICOMOS_IFLA_2017_b	CH general criteria framework (common framework, preservation, documents, CH); ICOMOS_1996; UNESCO_2001	CH general criteria framework (common framework, preservation, documents, CH); UNESCO_1970; UNIDROIT_1995; ICOMOS_2003_b	UNESCO_2003

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PURPOSE		ASSET TYPE											
PURPOSE	SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
PRESERVATION	EU - Projects	EP_001; EP_014; EP_015; EP_017; EP_020; EP_031; EP_033; EP_037; EP_038; EP_040; EP_049; EP_050; EP_052; EP_053; EP_054; EP_057; EP_059; EP_061; EP_062; EP_064; EP_067; EP_068; EP_071; EP_076; EP_085; EP_090; EP_096; EP_097; EP_098; EP_100; EP_101; EP_106; EP_108; EP_110; EP_112; EP_113; EP_114; EP_118; EP_119; EP_121; EP_122; EP_123; EP_124; EP_125; EP_126; EP_127; EP_128; EP_129; EP_132; EP_133; EP_135; EP_136; EP_137; EP_138; EP_140; EP_142; EP_146; EP_148; EP_149; EP_152; EP_153; EP_155; EP_156	EP_002; EP_011; EP_083		EP_012; EP_102	EP_065	EP_022; EP_031; EP_080; EP_081; EP_117		EP_016; EP_043; EP_058; EP_109	EP_018; EP_030; EP_045; EP_078	EP_019; EP_030; EP_0303; EP_060; EP_141	EP_023; EP_032; EP_047; EP_073; EP_075; EP_084; EP_086; EP_093; EP_099; EP_111; EP_115; EP_130; EP_144; EP_147	EP_011; EP_024; EP_026; EP_028; EP_035; EP_041; EP_042; EP_077; EP_105; EP_116; EP_143; EP_151; EP_154

PURPOSE		ASSET TYPE											
VALORISATION	SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
Best Practices			BP_001; BP_007; BP_012; BP_019; BP_022; BP_026; BP_028; BP_030; BP_034; BP_035	BP_003; BP_029; BP_036; BP_037	BP_009; BP_025; BP_039	BP_008; BP_014; BP_015; BP_018; BP_032; BP_033	BP_002; BP_005; BP_010; BP_021; BP_022; BP_038; BP_040	BP_004; BP_013; BP_016	BP_006; BP_011; BP_024; BP_027; BP_031; BP_041	BP_017; BP_022			BP_042

ASSET TYPE												
PURPOSE SOURCE	Cultural Heritage	Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natur al hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
VALORISATION Documents	VVAA_1931; SCAFA_1932; CE_1985; ICOMOS_1994; CEC_1998; ICOMOS_1999_a; UNESCO_2005; CE_2005; ICOMOS_2005; ICOMOS_2008_a; ICOMOS_2008_b; ICOMOS_2008_c; EC_2010; VVAA_2011; ICOMOS_2011_b; ICOMOS_2011_c; EU_2012_a; EU_2012_b; UNESCO_ICCROM_ICOMOS_IUCN_2013 ; A_ICOMOS_2013; VVAA_2014_a; VVAA_2014_b; EU_2014_a; CEU_2014; EU_2014_b; ICOMOS_2014; CHCfE_2015_a; CHCfE_2015_b; ICOMOS_2015; EC_2015; EU_2015; UN_2016; ICOMOS_2017_a; VVAA_2017; EC_2017_a; EC_2017_b; ICOMOS_2017_d; EC_2018_a; EC_2018_b; VVAA_2018; EU_2018; ICOMOS_2018; EUHeritage_2019; VVAA_2019; EC_2019; UNESCO_2019_b; ICOMOS_2020; EC_2021_b	CH general criteria framework (common framework , valorisatio n, document s, CH)	CH general criteria framework (common framework , valorisatio n, valorisati on, docume nts, CH)	CH general criteria framework (common framework , valorisatio n, document s, CH); ICOMOS_ TICCIH_2 003	CH general criteria framework (common framework, valorisation, documents, CH); VVAA_1991; ICOMOS_ISC 20C_2011; ICOMOS_ISC 20C_2014; ICOMOS_ISC 20C_2017	CH general criteria framework (common framework , valorisatio n, valorisat ion, docume nts, CH); ICOMOS_ S_2017 _b	CH general criteria framework (common framework , valorisatio n, document s, CH); UNESCO _1954; VVAA_20 10; UNESCO _2018	CH general criteria framework (common framework , valorisatio n, valorisati on, documen ts, CH); VVAA_19 60; UNESCO _2011_b; VVAA_20 16; UNESCO _2019_a	CH general criteria framework (common framework , valorisati on, documen ts, CH); ICOMOS_ IFLA_2 017_a; ICOMOS_ IFLA_2 017_b	CH genera l criteria frame work (comm on frame work, document s, CH); UNES CO_2 001	CH general criteria framework (common framework , valorisatio n, document s, CH); UNESCO_ 1970; UNIDROIT _1995	UNESCO _2003; UNESCO _2011_a

		ASSET TYPE														
PURPOSE	SOURCE	Cultural Heritage				Ancient constructions	Post industrial revolution architecture	Industrial archaeology assets	20th century architectural heritage	Archaeological sites	Assets with signs of conflicts/natural hazards	Urban spaces/assets	Landscape and historical gardens	Water's heritage	Artefacts	Intangible heritage
		EP_001; EP_014; EP_036; EP_040; EP_053; EP_067; EP_085; EP_100; EP_108; EP_114; EP_121; EP_129; EP_145;	EP_005; EP_017; EP_037; EP_046; EP_054; EP_068; EP_095; EP_103; EP_110; EP_118; EP_122; EP_131; EP_146;	EP_006; EP_021; EP_038; EP_050; EP_062; EP_070; EP_096; EP_104; EP_112; EP_119; EP_123; EP_134; EP_152;	EP_008; EP_034; EP_039; EP_052; EP_064; EP_071; EP_097; EP_106; EP_113; EP_120; EP_124; EP_140; EP_153	EP_011		EP_012; EP_102		EP_022; EP_074		EP_058	EP_044; EP_045; EP_094	EP_019; EP_063; EP_141	EP_023; EP_025; EP_027; EP_047; EP_072; EP_111	EP_011; EP_021; EP_150
VALORISATION	EU - Projects															

Appendix 5 – Crossed analysis of skills and best practices in the field of Conservation, Preservation and Valorisation of monuments and sites

	Number	Purposes	Activities	Area of effectiveness in Conservation, Preservation and Valorisation practices
S01	Achievement of Environmental Challenges and Objectives	Conservation Preservation Valorisation		
	Skills			
BP_n		Historic and bibliographic research Studies on CH Documentation of CH Communication of CH Preventive conservation Diagnostic activities Identification of the risks and deterioration patterns Materials conservation tests Pre-consolidation, cleaning, consolidation and protection of CH materials Reinforcement of CH buildings Monitoring Maintenance practices Management and administration practices Promotion and support of interventions for conservation Project of restoration Reconstruction Adaptive re-use of CH Accessibility Dissemination through publications Organisation of events and festivals Encounters with communities Educational activities and programmes Creation of partnership and networking Advertisements with CH Gaming with CH	Digital Innovation <i>(i.e. ICT solutions and tools, 3D documentation and digitisation, digital twin, digital storytelling)</i> Development and/or experimentation of techniques and methodologies <i>(i.e. use of special and advanced materials, technologies and/or methodologies, interdisciplinarity and transversal approach, sustainable and green solutions)</i> Transferability <i>(i.e. provision of training/up-skilling for traditional and new profession, guidelines for data acquisition, management and storage, catalogue of standards, replicable strategies)</i> Policies and Governance Strategies <i>(i.e. guidance on policies and governance strategies, advice on funding opportunities, brokerage between heritage and related industries)</i> Engagement, Exploitation and Social Innovation <i>(i.e. bottom up approaches, heritage communities involvement, stakeholders and volunteers management and advocacy, exploitation of CH as social and economic resource, exploitation results, social innovation)</i>	

From BP

- Monitoring / Transferability: carrying out microclimatic monitoring campaigns (BP_008 / users: international committee specially established for the UNESCO World Heritage asset, scholars, architects, engineers, workers and institutions)
- Project of restoration / Development and/or experimentation of techniques and methodologies: supplying energy provided by centralized cogeneration systems using waste vegetable oil (BP_009 / users: architect)
- Project of restoration / Transferability: identifying solutions of addition able to improve the internal comfort and maximise the conservation of the existing CH asset (BP_008 / users: international committee specially established for the UNESCO World Heritage asset, scholars, architects, engineers and workers)
- Adaptive re-use of CH / Development and/or experimentation of techniques and methodologies: considering the use vocation of the CH asset taking into account consumes containment through reflections on space dimensions and thermic dispersions, as well as the purposes of users wealth, respect for the environment, costs reduction and building preservation (BP_014 / users: foundation, architects and universities); carrying out energy saving and renewable energy measures, taking care of the aspects related to the containment of energy consumption, for example by building a geothermal plant for the production of hot and cold thermal fluid (BP_029 / users: universities, architects and scholars); including plant design and energy renovation in the restoration works for the preservation and re-use of a CH asset (BP_036 / users: artists, architects and company)

[illegible]

From BP

- Communication of CH / Digital innovation: using light as an integral part of public actions and landscape, also for the communication of CH, integrating new technical possibilities using light for urban and social development, preventing the danger of luminous cacophony, and reducing energy demand and nocturnal pollution (BP_011 / users: municipality); combining immersive audio theatre, interactive technology, architectural installations and live performances to allow exploring destroyed CH assets, where the technology that powers this can be a bespoke hardware and software system that can use NFC, GPS, haptics, accelerometer, gyroscope and compass, hidden within a design object (BP_042 / users: foundation, design studio, theatre company, sound artist and software developers)
- Communication of CH / Transferability: using light as an integral part of public actions and landscape, also for the communication of CH, integrating new technical possibilities using light for urban and social development, preventing the danger of luminous cacophony, and reducing energy demand and nocturnal pollution (BP_011 / users: municipality)
- Diagnostic activities / Development and/or experimentation of techniques and methodologies: using analytical means to characterize materials, such as in the case of decorated tiles which can be stabilized in epoxy resin, lapped and polished to obtain a flat surface for observation and analysis by scanning electron microscopy coupled with an X-ray energy-dispersive spectrometer, and from which optical images of cross sections can be obtained with a digital camera coupled to a stereomicroscope, while the pigment glaze can be analysed *in situ*, over the face of the tiles, by energy-dispersive X-ray fluorescence with a hand-held spectrometer, after which spectra can be interpreted with a software and principal component analysis can be made of energy-dispersive spectrometer results using a software platform (BP_035 / users: museums, society for conservation, laboratories and university)
- Monitoring / Development and/or experimentation of techniques and methodologies: carrying out microclimate monitoring campaigns in order to make choices compatible with the conservation of the CH asset and the goods guarded inside it (BP_023 / users: university); carrying out campaigns of measurements consisting in the monitoring of indoor and outdoor climatic conditions through data-loggers and seasonal thermographic and psychrometric mapping for CH analysis and conservation, as well as to assess both the hygrothermal comfort conditions and the performance of the building envelope to design an appropriate strategy for retrofitting and improving energy efficiency (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)
- Monitoring / Transferability: carrying out microclimate monitoring campaigns in order to make choices compatible with the conservation of the CH asset and the goods guarded inside it (BP_023 / users: university)
- Promotion and support of interventions for conservation / Development and/or experimentation of techniques and methodologies: preparation of sophisticated lighting designs for the reuse and enhancement of CH (BP_004 / users: lighting design company and committee following the works on the CH asset)
- Reconstruction / Development and/or experimentation of techniques and methodologies: combining immersive audio theatre, interactive technology, architectural installations and live performances to allow exploring destroyed CH assets, where the technology that powers this can be a bespoke hardware and software system that can use NFC, GPS, haptics, accelerometer, gyroscope and compass, hidden within a design object (BP_042 / users: foundation, design studio, theatre company, sound artist and software developers)

- Adaptive re-use of CH / Development and/or experimentation of techniques and methodologies: re-using CH equipping historic spaces with advanced technology (BP_032 / users: Ministry of Culture and architects)
- Accessibility / Development and/or experimentation of techniques and methodologies: monitoring through crowd analysis sensors the daily presence of visitors in a CH site (BP_027 / users: municipality, foundations and university)

[illegible]

From BP

- Historic and bibliographic research / Digital innovation: confluencing the historic and bibliographic research in a work able to adopt an ontology suitable for the representation of the exiting heritage through the modelling of domains, create a BIM model relative to the CH asset and design an interface between ontology and BIM system (BP_028 / users: university)
- Studies on CH / Digital innovation: confluencing the studies on a CH asset in a work able to adopt an ontology suitable for the representation of the exiting heritage through the modelling of domains, create a BIM model relative to the CH asset and design an interface between ontology and BIM system (BP_028 / users: university)
- Documentation of CH / Digital innovation: enabling the use of 3D morphometric surveys to investigate the complexity of the object using different technologies, such as the 3D laser scanner in order to obtain a 3D database, the topographic survey for the geo-referencing of the database and the photographic survey aimed at the implementation of a comprehensive knowledge of surfaces state of conservation, where the 3D models and information are semantically linked towards applications for the implementation of the overall documentation and data aggregation within a 3D modelling semantic approach which allows data association among survey data, modelling geometries related to the parametric modelling and information enrichment regarding the CH asset evolution, historical analysis and new forms of accessibility (BP_026 / users: start-up company); documenting a CH asset within a work able to adopt an ontology suitable for the representation of the exiting heritage through the modelling of domains, create a BIM model relative to the CH asset and design an interface between ontology and BIM system (BP_028 / users: university)

[illegible]

From BP

- Historic and bibliographic research / Digital innovation: promotion and carrying out art-historical and archaeological research to support the application of non-destructive-techniques, geophysics, 3D modelling and visualisation methods (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation)
- Studies on CH / Digital innovation: promotion and carrying out art-historical and archaeological research to support the application of non-destructive-techniques, geophysics, 3D modelling and visualisation methods (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation)
- Documentation of CH / Digital innovation: documentation of CH assets thanks to virtual explorations, for example through virtual walks under the direction of a museum guide or educational games where objects reveal a part of the game story through a short narrative when selected (BP_002 / users: professionals of virtual 3D reconstruction and interaction with digital heritage); 3D documentation of archaeological sites through the creation of virtual environments using aerial and terrestrial photogrammetry and terrestrial laser scanning (BP_005 / users: institute for research, technology and innovation and archaeological mission at the site); designing and developing innovative portals comprised of reliable and efficient technology-ready tools for the analysis, documentation and visualisation of CH assets (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation); application of cutting-edge technology and augmented reality at the service of history and CH through interactive tablets which offer a modern museography system for an immersive digital visit to go back in time and “see the invisible” (BP_012 / users: city tourism office, association start-up and scientific committee); digitalising CH sites and their remains in 3D models available to researchers and people (BP_038 / users: association); realisation of apps which can show city’s scenes from a bygone era and allow people to look through the cameras on their smartphones at different sites where an overlay showing historic photographs can appear across the present-day scene, enriched by historical information (BP_041 / users: creative agency and museum)
- Communication of CH / Digital innovation: Communication of sites, buildings, materials, techniques of construction, tools and CH data of archaeological sites through 3D models and virtual environments, useful to make comparisons over time too (BP_005 / users: institute for research, technology and innovation and archaeological mission at the site); design and develop of innovative portals comprised of reliable and efficient technology-ready tools for the analysis, documentation and visualisation of CH assets (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation); predisposition of interactive tablets for visitors which, thanks to 3D technologies, augmented reality and a geolocation system, can show historical reconstructions in 360° of what the CH asset was like, as well as tell about its history, with the addition of the historical content of the old audio guides for an in-depth approach to its history, allowing the public to discover and understand the CH asset through an intuitive, digital, interactive, educational

and entertaining way of visiting that gives an experience of virtual immersion in the past (BP_012 / users: city tourism office, association start-up and scientific committee); realising 3D video games for CH assets based on the involvement given by the narration and immersion through reconstructed scenarios acquired with image-based modelling techniques that exploit photogrammetry and computer vision algorithms to build virtual models of real objects by processing digital images with special software (BP_021 / users: National Research Centre, museum and private company); realisation of 3D models that can allow multimedia visualisations and applications to enhance the CH asset and create innovative ways to explore the artistic and architectural heritage and new forms of accessibility (BP_026 / users: start-up company); communicating CH through works able to adopt ontologies suitable for the representation of the exiting heritage through the modelling of domains, create BIM models relative to the CH asset and design an interface between ontology and BIM system (BP_028 / users: university)

- Monitoring / Digital innovation: using advanced digital tools for the creation and development of real-time virtual environments for research and collaboration that can capture data of users' behaviour in historic urban realities (BP_006 / users: scholars and virtual environments lab of an institute for research, technology and innovation)
- Management and administration practices / Digital innovation: adoption of digitalisation as a tool for planning the "musealisation" of a CH site, keeping to a minimum the risks related to visits and monitoring its state enabling interventions to be made quickly when needed (BP_005 / users: institute for research, technology and innovation and archaeological mission at the site); developing digital platforms which, through immersion, urban data modelling and interactive visualisation, can enable the evaluation of planning scenarios and design interventions in the context of the management plan of historic open public spaces and assets (BP_006 / users: scholars and institute for research, technology and innovation)
- Reconstruction / Digital innovation: virtual reconstruction of past configurations, also through 3D soundscapes (BP_002 / users: professionals of virtual 3D reconstruction and interaction with digital heritage); realisation of apps which can show scenes from a bygone era, for example allowing people to look through the cameras on their smartphones at different sites where an overlay showing historic photographs appears across the present-day scene and is enriched with historical information (BP_041 / users: creative agency and museum)
- Gaming with CH / Digital innovation: developing of games and interactive experiences through user-friendly interpretations of the CH asset, encouraging explorations and linking spaces and objects in an engaging way, implementation of systems, such as the TimeGate that consists of games PC, a Kinect2 camera and a short-throw projector which allows to navigate through and interact with the reconstructed virtual world, and creation of software, such as that created on the Unity3D platform with the interface to the Kinect2 camera as an internal script (BP_002 / users: professionals of virtual 3D reconstruction and interaction with digital heritage); realising 3D video games for CH assets (BP_021 / users: National Research Centre, museum and private company)
- Gaming with CH / Transferability: realising a 3D video game for a CH asset (BP_021 / users: National Research Centre, museum and private company)

S05	ENCOURAGING AND SUPPORTING THE DEVELOPMENT OF NETWORKS	Number Skills	Purposes		Activities																				Area of effectiveness in Conservation, Preservation and Valorisation practices																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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- From BP**
- Monitoring / Policies and governance strategies: monitoring and evaluating in quantitative and qualitative ways the changes in the CH site for its management, assessing together with the inhabitants and citizens which solutions can be found in the balance between preservation and development (BP_011 / users: municipality, Observatory of Cultural Heritage, inhabitants and citizens)
 - Management and administration practices / Policies and governance strategies: managing and administrating the activities in a CH site within the framework of a city event and/or festival (BP_010 / users: municipality and association); developing and adopting a city management plan which can guarantee the place of the historic site in a city in development, while at the same time watching to safeguard the spirit of the place, generating a mechanism of governance that creates conditions for a proper coordination of heritage stakeholders at local level (BP_011 / users: municipality)
 - Promotion and support of interventions for conservation / Policies and governance strategies: promoting and supporting interventions for conservation, preservation and valorisation through cooperation and the development of networks (BP_004 / users: UNESCO, World Monuments Fund, World Bank, European Union, agency to improve well-being and perspectives, and municipal authorities; BP_010 / users: municipality and association); supporting projects for the conservation also of modern architecture (BP_014 / users: foundation)
 - Project of restoration / Policies and governance strategies: creation of an in-depth collaboration for the restoration project (BP_008 / users: international committee specially established for the UNESCO World Heritage asset, scholars, architects, engineers, workers and institutions)
 - Dissemination through publications / Policies and governance strategies: promotion of dissemination activities for the documentation of the CH asset and the interventions carried out on it (BP_008 / users: local institutions)
 - Encounters with communities / Engagement, exploitation and social innovation: collecting, exploring and discussing different point of view expressed by different stakeholders, also through workshops in the framework of a conservation plan with an interdisciplinary approach which can include a comprehensive evaluation and understanding of the material and immaterial values that are represented in the CH asset, including the different meaning experienced

everyday by the users, such as students and workers that live, study and meet in the CH spaces (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)

- Creation of partnership and networking / Development and/or experimentation of techniques and methodologies: creation of patronage and sponsorship for the CH financing, protection and enhancement which through events, such as fashion shows (BP_031 / users: fashion house)
- Creation of partnership and networking / Transferability: creation of partnership and networking for reconstruction (BP_004 / users: UNESCO, World Monuments Fund, World Bank, European Union, agency to improve well-being and perspectives, and municipal authorities); involving the dedicated stakeholders and the members of the stakeholder panel that supported a consortium in focusing effective strategies to increase the use and reuse of CH assets and digital models (BP_026 / users: institution, architects, scholars and start-up company); creation of patronage and sponsorship for the CH financing, protection and enhancement through events, such as fashion shows (BP_031 / users: fashion house)
- Creation of partnership and networking / Policies and governance strategies: creation of partnership and networking for reconstruction (BP_004 / users: UNESCO, World Monuments Fund, World Bank, European Union, agency to improve well-being and perspectives, and municipal authorities); creation of partnership and networking for 3D documentation, communication and management of a CH asset (BP_005 / users: institute for research, technology and innovation and archaeological mission at the site); creation of partnership and networking in the context of actions for public spaces (BP_006 / users: Municipality, national Department of Antiquities, Universities and institute for research, technology and innovation); creation of partnership and networking for the integration of expertise from different disciplines, forging essential links and synergies for the delivery of innovative tools to tackle challenges related to the knowledge, conservation and restoration of CH sites (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation); creation of partnership and networking for the analyses and restoration project (BP_008 / users: international committee specially established for the UNESCO World Heritage asset, scholars, architects, engineers, workers and institutions); creation of partnership and networking for heritage landscapes (BP_010 / users: architects, municipality and association); involving of a large ecosystem of stakeholders from the listening and co-design phases to the experimentations for the use of CH as an engine to work towards a common urban regeneration and development vision involving citizens, the engage in active and serious listening in a cooperative manner, the organisation of communications campaigns to promote local heritage, and the demonstration of the willingness to listen to citizens and to reflect their needs (BP_027 / users: municipality, foundations, university and citizens); creating networking to support and enable CH protection, valorisation and management (BP_032 / users: Ministry of Culture, Region, Municipality, societies, bank group, church, green partner, digital sponsor, architects and association); creating networking to favour the recognition of the architectural significance of a CH asset and promote its conservation (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects); creation of partnership and networking for a deep analysis and conservation work (BP_035 / users: museums, society for conservation, laboratories and university); creating human, cultural and emotional links with other municipalities through CH, and contributing to form cultural routes (BP_038 / users: association and municipalities); launching competitions for artists, creatives and technologists to create an immersive storytelling experience of CH (BP_042 / users: foundation, design studio, theatre company, sound artist and software developers)
- Creation of partnership and networking / Engagement, exploitation and social innovation: realisation of community museums which make it possible to enhance the socio-cultural and intangible heritage of the place, activate the resources of the territorial community, highlight the links between heritage, human rights and democracy, and encourage the construction of meanings and values around objects and places by people, involving the inhabitants in a participatory and generative process from below aimed at defining common goods, building and consolidating networks and actions to generate, nurture and support the diffuse museum, and building a new form of welfare in a relational key (BP_024 / users: social cooperative, social enterprise, national museum, association, social street, schools, university, foundation, residents); involving a large ecosystem of stakeholders from the listening and co-design phases to the experimentations for the use of CH as an engine to work towards a common urban regeneration and development vision involving citizens, the engage in active and serious listening in a cooperative manner, the organisation of communications campaigns to promote local heritage, and the demonstration of the willingness to listen to citizens and to reflect their needs (BP_027 / users: municipality, foundations, university and citizens)

[illegible]

From BP

- Organisation of events and festivals / Transferability: organisation of artistic events in CH assets (BP_025 / users: consortium company)
- Organisation of events and festivals / Engagement, exploitation and social innovation: organising and connecting the activities in a CH asset to creative festival activities and designing multi-purpose spaces, from exhibition halls to work and research rooms, and event venues (BP_009 / users: collector, foundation and architect)
- Encounters with communities / Engagement, exploitation and social innovation: transforming abandoned spaces for example into complexes with exhibition spaces, artist residencies, workshops and other services related to cultural production, focusing on the relationship between art, culture, environmental issues, human rights, education and research (BP_009 / users: collector, foundation and architect); involvement of citizens who feed the pillars of creativity and innovation generating a cultural device that constitutes an entrepreneurial accelerator (BP_025 / users: consortium company)
- Educational activities and programmes / Engagement, exploitation and social innovation: transforming abandoned spaces into complexes with exhibition spaces, artist residencies, workshops and other services related to cultural production, focusing on the relationship between art, culture, environmental issues, human rights, education and research (BP_009 / users: collector, foundation and architect)
- Creation of partnership and networking / Policies and governance strategies: involvement of citizens who feed the pillars of creativity and innovation generating a cultural device that constitutes an entrepreneurial accelerator (BP_025 / users: consortium company)

[illegible]

From BP

- Studies on CH / Engagement, exploitation and social innovation: involving the public, scholars and experts in the work on a CH asset (BP_038 / users: association, experts, scholars and public)
- Communication of CH / Transferability: developing a landscape project on an archaeological site, consequent and parallel to the archaeological excavations, realising an archaeological park and museum where visitors can access and learn about the history and evolution of the site (BP_017 / users: architects, landscape architecture firm and designers)
- Communication of CH / Engagement, exploitation and social innovation: realisation of a memorial site with a documentation centre in a dissonant heritage place (BP_018 / users: architect and urban planner); communication of destroyed CH assets with the active participation of visitors, for example through the use of binaural sound to create immersive 3D sound worlds, multisensory technology and gestural recognition to make physical actions in the contemporary world have implications in the virtual historic world, giving real agency to the visitor so that everyone has a different and personalised experience (BP_042 / users: foundation, design studio, theatre company, sound artist and software developers)
- Management and administration practices / Engagement, exploitation and social innovation: involving people in the management of a CH site (BP_038 / users: association)
- Adaptive re-use of CH / Transferability: adaptive re-use of existing buildings and their open spaces (BP_001 / users: architects, engineers and designers for landscaping); realisation of new structures which traces the scheme of the original structure, giving the possibility for a new use of the CH asset, throughout floors, vaults, walls, columns, lofts and an elevator shaft power (BP_013 / users: architects, engineers and companies); realisation of a documentation centre in a dissonant heritage asset with exhibition halls where the walls themselves, preserved in their material consistency, become part of the documentation, while the additions speak a contemporary architectural language (BP_015 / users: architect and municipal museums); reusing CH as a reference point and an inclusive square in people's social lives, eventually enriching it through artistic illustrations (BP_032 / users: Ministry of Culture, architects, illustrator and association); converting CH complexes into cultural centres for artistic events (BP_039 / users: City Council and architects)

- Adaptive re-use of CH / Policies and governance strategies: preventing CH demolition through creative planning, transformation and re-use (BP_036 / users: artists, architects and company)
- Adaptive re-use of CH / Engagement, exploitation and social innovation: using participatory methods, listening the wishes of the citizens and co-designing with students to redesign historical public spaces and restore a social dimension (BP_027 / users: municipality, foundations, university and citizens)
- Accessibility / Transferability: designing indoor and outdoor walkways for accessibility (BP_001 / users: architects and engineers); designing new entrances to enhance accessibility to a CH site (BP_010 / users: architects); realising new structures which traces the scheme of the original structure, giving the possibility for a new use of the CH asset, throughout floors, vaults, walls, columns, lofts and elevator shaft powers (BP_013 / users: architects, engineers and companies); developing a landscape project on an archaeological site, consequent and parallel to the archaeological excavations, realising an archaeological park and museum where visitors can access and learn about the history and evolution of the site (BP_017 / users: architects, landscape architecture firm and designers); adopting a logic of integrated cultural tourism system, articulated in networks, areas, complexes and intangible actions, providing accessibility to places of cultural tourism interest, favouring the enhancement of historical routes and eco-sustainable mobility, and allowing also those with mobility difficulties to enter and visit CH places (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); realising a new casing for archaeological finds which allows the excavations to be protected and visited and that reinterpreted the pre-existence in a relationship between history and the present (BP_040 / users: architects)
- Organisation of events and festivals / Policies and governance strategies: organisation of events, festivals and the opening of new spaces dedicated to the arts in the city and, within this framework, accompanying cultural experiences by activities in the CH asset (BP_010 / users: municipality and association)
- Organisation of events and festivals / Engagement, exploitation and social innovation: organisation of annual festivals, such as a festival of lights when, for a series of nights, artists lit up buildings, streets, squares and parks all over the city with several installations, closely embedding the urban lighting in the whole city scape as part of the city's heritage (BP_011 / users: municipality); inviting children and families on treasure hunts with 3D objects that can be manipulated and found throughout the tour in the CH asset and, within the framework of regular cultural animations organised throughout the year, consisting of thematic and educational exhibitions, thematic visits and concerts, organising festivals with immersive shows powered by both image and sound (BP_012 / users: city tourism office, association start-up and scientific committee); using intangible actions to activate wide-ranging digital services and to realise information products throughout the territory, implementing services that envisage the design and realisation of portals for integrated cultural tourism systems, through which to network both those operating in the territory, to publicise the initiatives and events aimed at expanding the tourist offer and creating greater involvement of residents, and visitors, to whom a complete framework of the tourist offer and services and suggested itineraries can be presented in relation to their financial and time resources (BP_022 / users: European Commission, Ministry of Culture, professionals for CH, scholars and experts of digital services); organisation of events to reconnect open public spaces in the historic city and give them back to citizens in a shared and participatory process (BP_027 / users: municipality, foundations, university and citizens); realisation of multifunctional spaces for exhibitions and events inside CH (BP_032 / users: Ministry of Culture, architects and association); contributing to the enhancement of the value of the CH asset through the setting-up of an evocative contemporary venue in which to hold exhibitions and events (BP_034 / users: Region and foundation); organising events and cultural visits in CH assets, also with digital art and immersive rooms (BP_037 / users: society); organising theatrical performances in CH sites, involving children (BP_038 / users: association); converting CH complexes into cultural centres for artistic events (BP_039 / users: City Council and architects)
- Encounters with communities / Engagement, exploitation and social innovation: designing gardens in sites with archaeological remains, organising walks in the park, other wellness activities in green spaces and guided tours, also involving local people for getting to know the city and its heritage (BP_010 / users: landscape architects, municipality and association); organising workshops for people in the framework of festivals, such as the Festival of Lights (BP_011 / users: municipality and international network of cities on urban lighting); realisation of open-air museums which describe city districts through permanent and temporary actions to offer cultural poles for the enhancement of collective memory through the bottom-up production (BP_024 / users: social cooperative, social enterprise, national museum, association, social street, schools, university, foundation, residents); using participatory methods, listening the wishes of the citizens and co-designing with students to redesign historical public spaces and restore a social dimension (BP_027 / users: municipality, foundations, university and citizens); combining cultural visit and restoration to share with visitors the discoveries of the shipyard and to show how the restoration team worked, also with tablets with information, streams showing the work process and staff trained specifically to resolve visitors' doubts about restoration (BP_037 / users: architects, civil engineer, restoration team and trained staff); involving the public, scholars and experts in the work on a CH site, in a close relationships with the local people who can document with stories, songs and customs that they can shared as guests at the table in their homes (BP_038 / users: association, experts, scholars, public and local people)
- Creation of partnership and networking / Engagement, exploitation and social innovation: promoting contemporary creations in CH assets through programmes of grants and initiatives that combine artistic production and citizen participation (BP_039 / users: City Council, artists and citizen)
- Advertisements with CH / Development and/or experimentation of techniques and methodologies: making CH the protagonist of advertising events, such as fashion shows (BP_031 / users: fashion house)
- Advertisements with CH / Transferability: making CH the protagonist of advertising events, such as fashion shows (BP_031 / users: fashion house)

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From BP	<ul style="list-style-type: none"> Communication of CH / Policies and governance strategies: addressing target users, such as tourists, visitors, CH asset owners, scholars and professionals, to develop services such as a user-based walkthrough which is related to the understanding of the evolution of the building as a support for preservation or touristic applications (BP_026 / users: start-up company)
	<ul style="list-style-type: none"> Communication of CH / Engagement, exploitation and social innovation: designing and developing portals exploited by a variety of stakeholders and targeted to multiple economical actors, such as public authorities, universities and individuals, through online platforms and databases from which information and data can be extracted (BP_007 / users: European Regional Development Fund, national Department of Antiquities, national research and innovation foundation, university and institute for research, technology and innovation)
	<ul style="list-style-type: none"> Encounters with communities / Digital innovation: carrying out research on the use of interactive spatial data visualisation for stakeholder engagement in public space co-creation and co-management of historic cities (BP_006 / users: scholars and virtual environments lab of an institute for research, technology and innovation)
	<ul style="list-style-type: none"> Encounters with communities / Engagement, exploitation and social innovation: carrying out research on the use of interactive spatial data visualisation for stakeholder engagement in public space co-creation and co-management of historic cities (BP_006 / users: scholars and virtual environments lab of an institute for research, technology and innovation)

- From BP*

 - Reinforcement of CH buildings / Transferability: hallowing out embarkments (BP_001 / users: structural engineers); making usable in a safe and secure manner a CH asset, maximising its conservation (BP_019 / users: architects, engineers and scholars)
 - Management and administration practices / Transferability: envisaging management practices through conservation plans (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)
 - Project of restoration / Development and/or experimentation of techniques and methodologies: restoring building in ruins, reconstituting the original volume with new elements which reflect the lost without imitating it and preserving the part that remained, following the guidelines of Restoration Charts, respecting the historical structure in its different states of preservation and preserving also traces, as the war signs, as intangible heritage bearing witness to a past history (BP_016 / users: architects and specialists in heritage conservation); making usable in a safe and secure manner a CH asset and adapting in terms of plant engineering its spaces without altering its spatial and figurative qualities, by intervening more incisively on the neighbouring external spaces for the plant engineering system, lifts, staircase, storage and toilets to reduce the work to be done in the CH asset to the conservation work and carrying out the works for the passage of the plant engineering networks using the interstices detected during the survey campaign, ensuring at the same time the full compliance with safety and hygiene standards and regulations (BP_019 / users: architects, engineers and scholars)
 - Project of restoration / Transferability: using the various layers of the asset, including those came to light and standing out clearly the different phases, basing on the notion that they form an integral part of a history of changes (BP_001 / users: architects); designing a reasoned compromise between maintaining works already made and the realisation of completions and additions inspired by restoration concepts, such as using distinguishable materials and technologies compatible with the building and surrounding site, managing to fuse contemporary solutions and adapting them to the composure of the pre-existence (BP_013 / users: architects, engineers and companies); studying, analysing and preserving the CH asset components as material proofs of the history and transformation of the building over time (BP_014 / users: architects and foundation); realisation of a documentation centre in a dissonant heritage asset with exhibition halls where the walls themselves, preserved in their material consistency, become part of the documentation, while the additions speak a contemporary architectural language (BP_015 / users: architect and

municipal museums); restoring buildings in ruin, reCompleting the original volume with new elements which reflect the lost without imitating it and preserving the part that remained, following the guidelines of Restoration Charts, respecting the historical structure in its different states of preservation and preserving also traces, as the war signs, as intangible heritage bearing witness to a past history (BP_016 / users: architects and specialists in heritage conservation); making usable in a safe and secure manner a CH asset and adapting in terms of plant engineering its spaces without altering its spatial and figurative qualities, by intervening more incisively on the neighbouring external spaces for the plant engineering system, lifts, staircase, storage and toilets to reduce the work to be done in the CH asset to the conservation work and carrying out the works for the passage of the plant engineering networks using the interstices detected during the survey campaign, ensuring at the same time the full compliance with safety and hygiene standards and regulations (BP_019 / users: architects, engineers and scholars); combining the reinterpretation of the historical material substance with high technology, flexibility of spaces, accessibility for all and artistic installations envisaging the implementation of the principle of minimum intervention and preserving the historical vocation of the complex while moving from the material to the immaterial side (BP_025 / users: foundation, construction and civil engineers, architects and support technicians); developing a restoration project involving new public accesses, reorganising the internal paths and enhancing spaces (BP_026 / users: architects and scholars); responding the needs of the new function of a CH asset, while maintaining and enhancing the spaces and materials of the building (BP_029 / users: universities, architects and scholars); conserving and enhancing the diachronic heritage constituting the stratified building, and designing contemporary solutions with the addition of new meanings (BP_030 / users: architects and scholars); establishing a dialogue between old and new working on the theme of restoration as respect for the ruin as a material proof of memories of the past, enhancing its values, maximising the conservation of existing, adding punctual and legible integrations, making the structure safe, and maintaining visible the traces of the past, including for example the residue of cork insulation which recalls former uses, as well as the evidence of repair work (BP_039 / users: architects); realising a new casing for archaeological finds which allows the excavations to be protected and visited and that reinterpreted the pre-existence in a relationship between history and the present (BP_040 / users: architects)

- Reconstruction / Transferability: reconstruction linked to symbols and values, respecting the principle of distinguishability (BP_004 / users: UNESCO, World Monuments Fund, World Bank, European Union, agency to improve well-being and perspectives, and municipal authorities); designing a reasoned compromise between maintaining works already made and the realisation of completions and additions inspired by restoration concepts, such as using distinguishable materials and technologies compatible with the building and surrounding site, managing to fuse contemporary solutions and adapting them to the composure of the pre-existence (BP_013 / users: architects, engineers and companies)
- Reconstruction / Policies and governance strategies: promoting cooperation for reconstruction (BP_004 / users: UNESCO, World Monuments Fund, World Bank, European Union, agency to improve well-being and perspectives, and municipal authorities)
- Adaptive re-use of CH / Development and/or experimentation of techniques and methodologies: making usable in a safe and secure manner a CH asset and adapting in terms of plant engineering its spaces without altering its spatial and figurative qualities, by intervening more incisively on the neighbouring external spaces for the plant engineering system, lifts, staircase, storage and toilets to reduce the work to be done in the CH asset to the conservation work and carrying out the works for the passage of the plant engineering networks using the interstices detected during the survey campaign, ensuring at the same time the full compliance with safety and hygiene standards and regulations (BP_019 / users: architects, engineers and scholars)
- Adaptive re-use of CH / Transferability: considering the use vocation of the CH asset taking into account consumes containment through reflections on space dimensions and thermic dispersions, as well as the purposes of users wealth, respect for the environment, costs reduction and building preservation (BP_014 / users: foundation, architects and universities); transforming CH sites in drivers of cultural and creative industry through the realisation of creative and innovation hotbeds and research hubs, which proved to be transformed in specific health centres to counter emergencies (BP_025 / users: foundation, construction and civil engineers, architects and support technicians); responding the needs of the new function of a CH asset, while maintaining and enhancing the spaces and materials of the building (BP_029 / users: universities, architects and scholars); drawing up a conservation plan aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines, identification of new functions and uses, energy efficiency to improve the indoor comfort and reduce the operating costs, facilities and new connections with the city (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)
- Accessibility / Transferability: intervening more incisively on the neighbouring external spaces for the lifts and staircase to reduce the work to be done in the CH asset to the conservation work (BP_019 / users: architects, engineers and scholars); combining the reinterpretation of the historical material substance with accessibility for all envisaging the implementation of the principle of minimum intervention (BP_025 / users: foundation, construction and civil engineers, architects and support technicians); reconnecting horizontal and vertical routes in a CH asset through the introduction of walkways, staircases, including safety stairs, and lifts (BP_029 / users: universities, architects and scholars); drawing up a conservation plan taking into account the specific issues of the site, including the accessibility problems (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)

[illegible]

From BP

- Communication of CH / Engagement, exploitation and social media: diffusion of the results of European projects through digital platforms and social media (BP_027 / users: municipality, foundation and university)
- Organisation of events and festivals / Digital innovation: using intangible actions to activate wide-ranging digital services and to realise information products throughout the territory, for example implementing services that envisage the design and realisation of portals for integrated cultural tourism systems, through which to network both those operating in the territory, to publicise the initiatives and events aimed at expanding the tourist offer and creating greater involvement of residents, and visitors, to whom a complete framework of the tourist offer and services and suggested itineraries can be presented in relation to their financial and time resources (BP_022 / users: European Commission, Ministry of Culture, professionals for CH, scholars and experts of digital services)

[illegible]

From BP

- Communication of CH / Development and/or experimentation of techniques and methodologies: using light as an integral part of public actions and landscape, also for the communication of CH, integrating new technical possibilities using light for urban and social development, preventing the danger of luminous cacophony, and reducing energy demand and nocturnal pollution (BP_011 / users: municipality)
- Management and administration practices / Development and/or experimentation of techniques and methodologies: preparation of sophisticated lighting designs for the sustainable management of CH (BP_004 / users: lighting design company and committee following the works on the CH asset); management costs and impact assessment of social, economic and environmental actions related to CH (BP_032 / users: innovative start-up and research spin-off of university and green partner)
- Adaptive re-use of CH / Development and/or experimentation of techniques and methodologies: using participatory methods, listening the wishes of the citizens and co-designing with students to redesign historical public spaces and restore a social dimension, while paying particular attention to greening and lighting as design elements, also with a look towards present and future changes in the climate by changing behaviour and reduce temperatures in urban spaces subjected to heat weaves (BP_027 / users: municipality, foundations, university, associations, entrepreneurs and citizens)
- Adaptive re-use of CH / Transferability: using participatory methods, listening the wishes of the citizens and co-designing with students to redesign historical public spaces and restore a social dimension, while paying particular attention to greening and lighting as design elements, also with a look towards present and future changes in the climate by changing behaviour and reduce temperatures in urban spaces subjected to heat weaves (BP_027 / users: municipality, foundations, university, associations, entrepreneurs and citizens)
- Accessibility / Transferability: using participatory methods, listening the wishes of the citizens and co-designing with students to redesign historical public spaces and restore a social dimension, while paying particular attention to greening and lighting as design elements, also with a look towards present and future changes in the climate by changing behaviour and reduce temperatures in urban spaces subjected to heat weaves (BP_027 / users: municipality, foundations, university, associations, entrepreneurs and citizens)

- From BP*

 - Historic and bibliographic research / Transferability: carry out analyses based on archival documents, design drawings, photographs, bibliographic sources and contacts with the heirs for the conservation and restoration project (BP_008 / users: professionals for conservation investigation campaigns)
 - Studies on CH / Transferability: carry out analyses based on the direct reading of the CH asset for the conservation and restoration project (BP_008 / users: professionals for conservation investigation campaigns)
 - Preventive conservation / Development and/or experimentation of techniques and methodologies: regulating the internal temperature and relative humidity of a CH asset without HVAC systems through a precise windows opening and the numerical control of the visitors (BP_023 / users: guardians)
 - Preventive conservation / Transferability: drawing up a programme of conservation, prevention, maintenance and restoration interventions supported and accompanied by a scientific and technical study plan aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); regulating the internal temperature and relative humidity of a CH asset without HVAC systems through a precise windows opening and the numerical control of the visitors (BP_023 / users: guardians); drawing up a conservation plan aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects)
 - Diagnostic activities / Transferability: deep analysis and study of the pre-existing asset, its materials and state of conservation (BP_001 / users: architects and restorer/conservator of architectural surfaces; BP_008 / users:

- professionals for conservation investigation campaigns; BP_035 / users: society for conservation, laboratories and university); carrying out careful investigations on materials, consistencies and structures during the design process (BP_019 / users: architects, engineers and scholars); drawing up a programme of conservation, prevention, maintenance and restoration interventions supported and accompanied by a scientific and technical study plan aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); carrying out of diagnostic activities in the framework of a conservation plan aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects); carrying out of deep analysis and planning to define short, medium and long term conservation interventions and maintenance practices (BP_037 / users: architects, civil engineer and restoration team)
- Identification of the risks and deterioration patterns / Transferability: analysis and identification of the deterioration patterns for CH materials conservation (BP_019 / users: architects, engineers and scholars; BP_020 / users: architect, archaeologist, Soprintendenza and company); drawing up programmes of conservation, prevention, maintenance and restoration interventions supported and accompanied by scientific and technical study plans aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); identification of the risks and deterioration patterns in the framework of conservation plans aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects); carrying out deep analysis and planning to define short, medium and long term conservation interventions and maintenance practices (BP_037 / users: architects, civil engineer and restoration team)
 - Materials conservation tests / Transferability: carrying out materials conservation tests before and for the intervention (BP_019 / users: architects, engineers and scholars; BP_020 / users: architect, archaeologist, Soprintendenza and company); drawing up a programme of conservation, prevention, maintenance and restoration interventions supported and accompanied by a scientific and technical study plan aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars)
 - Pre-consolidation, cleaning, consolidation and protection of CH materials / Development and/or experimentation of techniques and methodologies: conservation of industrially-produced materials (BP_014 / users: architects and foundation)
 - Pre-consolidation, cleaning, consolidation and protection of CH materials / Transferability: conservation of the existing CH materials (BP_001 / users: architects and restorer/conservator of architectural surfaces; BP_013 / users: architects, engineers and companies; BP_034 / users: engineers, architects and scholars; BP_035 / users: society for conservation, laboratories and university); conservation of architecture and interior decoration (BP_003 / users: architect and craftsmen; BP_008 / users: international committee specially established for the UNESCO World Heritage asset, scholars, architects, engineers and workers); conservation of the CH materials of buildings in ruin, also preserving the traces as war signs as intangible heritage bearing witness to a past history (BP_016 / users: architects and specialists in heritage conservation); conservation of the internal and external materials and decorative apparatus that characterise the CH asset, including those which time had profoundly marked (BP_019 / users: architects and scholars); conservation of CH materials, ensured also by equipment designed *ad hoc* (BP_020 / users: architect, archaeologist, Soprintendenza and company); drawing up programmes of conservation, prevention, maintenance and restoration interventions supported and accompanied by scientific and technical study plans aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); conservation of the historical material substance (BP_025 / users: foundation, construction and civil engineers, architects and support technicians); carrying out interventions for the conservation of external façades and internal finishing works (BP_029 / users: archaeology cooperative); conserving the materials of the diachronic heritage constituting the stratified building (BP_030 / users: architects and scholars); preserving the construction material traces (BP_032 / users: architects); drawing up a conservation plan aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects); carrying out deep analysis and planning to define short, medium and long term conservation interventions and maintenance practices (BP_037 / users: architects, civil engineer and restoration team); respecting the ruin as a material proof of memories and maintaining visible the traces of the past, including for example the residue of cork insulation which recalls former uses, as well as the evidence of repair work (BP_039 / users: architects)
 - Reinforcement of CH buildings / Transferability: carrying out safety interventions through the addition of structures to consolidate the building, which speak contemporary language and make it possible to maximises the conservation of the existing material substance (BP_034 / users: engineers, architects and scholars)
 - Monitoring / Transferability: carrying out studies on effects on the CH materials during the periodic maintenance with a view to making an even greater contribution to the CH conservation (BP_020 / users: architect, archaeologist, Soprintendenza and company)
 - Maintenance practices / Development and/or experimentation of techniques and methodologies: preserving industrially-produced materials in their stratification also through the maintenance practices, conserving and adopting distinguishable integrations (BP_014 / users: architects and foundation)
 - Maintenance practices / Transferability: envisaging a programmed maintenance plan (BP_020 / users: architect, archaeologist, Soprintendenza and company); drawing up programmes of conservation, prevention, maintenance and restoration interventions supported and accompanied by scientific and technical study plans aimed at making diagnoses, deepening scientific knowledge and guiding operational choices (BP_022 / users: European Commission, Ministry of Culture, professionals for CH and scholars); regulating the internal temperature and relative humidity of a CH asset without HVAC systems through a precise windows opening and the numerical control of the visitors (BP_023 / users: guardians); drawing up conservation plans aimed at suggesting feasible solutions and development scenarios which includes aspects such as conservation procedures and guidelines (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects); carrying out deep analysis and planning to define short, medium and long term conservation interventions and maintenance practices (BP_037 / users: architects, civil engineer and restoration team)

Number	Skills	Purposes		Activities																							Area of effectiveness in Conservation, Preservation and Valorisation practices				
		Conservation		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Preservation		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Valorisation		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
				Historic and bibliographic research	Studies on CH	Documentation of CH	Communication of CH	Preventive conservation	Diagnostic activities	Identification of the risks and deterioration patterns	Materials conservation tests	Pre-consolidation, cleaning, consolidation and protection of CH materials	Reinforcement of CH buildings	Monitoring	Maintenance practices	Management and administration practices	Promotion and support of interventions for conservation	Project of restoration	Reconstruction	Adaptive re-use of CH	Accessibility	Dissemination through publications	Organisation of events and festivals	Encounters with communities	Educational activities and programmes	Creation of partnership and networking	Advertisements with CH	Gaming with CH			
S13	<u>TRAINING AND EDUCATIONAL ACTIVITIES</u>	BP_n				15	12														16 29 33 34 35		26	3 15 17 18 26 33 34 37			26		15 16 17 29 34 35	12 33	3 15 18 26 33 34 37

From BP	<ul style="list-style-type: none"> Documentation of CH / Transferability: realising documentation centres in dissonant heritage assets with exhibition halls where the walls themselves, preserved in their material consistency, become part of the documentation, while the additions speak a contemporary architectural language (BP_015 / users: architect and municipal museums) Communication of CH / Policies and governance strategies: predisposition of interactive tablets for visitors which, thanks to 3D technologies, augmented reality and a geolocation system, can show historical reconstructions in 360° of what the CH asset was like, as well as tell about its history, with the addition of the historical content of the old audio guides for an in-depth approach to its history, allowing the public to discover and understand the CH asset through an intuitive, digital, interactive, educational and entertaining way of visiting that gives an experience of virtual immersion in the past (BP_012 / users: city tourism office, association start-up and scientific committee) Dissemination through publications / Transferability: dissemination of the restoration works through dedicated books with documentation, drawings, photos and descriptions (BP_016 / users: publishing houses; BP_029 / users: publishing houses; BP_034 / users: publishing houses); dissemination of the analysis and conservation work through scientific papers and online platforms (BP_035 / users: society for conservation, laboratories and university) Dissemination through publications / Policies and governance strategies: activation of dissemination strategies related to research and conservation activities (BP_033 / users: foundation, universities, institute for conservation and promotion of CH and architects) Encounters with communities / Engagement, exploitation and social innovation: organisation of training and educational activities through the use and reuse of CH assets and digital models (BP_026 / users: institution, architects, scholars and start-up company) Educational activities and programmes / Digital innovation: organisation of training and educational activities through the use of digital models (BP_026 / users: institution and start-up company) Educational activities and programmes / Transferability: implementing a combination of didactic intent, based on the historical data available on the site, and evocative intent, based on a subjective interpretation that leads the visitor to follow both the material and immaterial traces of the CH site, for example with a dual interpretation which permeates the entire landscaping, juxtaposing the main museum building and route system with a series of semantic nodes made up of small isolated pavilions dedicated to different aspects of reading the site (BP_017 / users: architects, landscape architecture firm and designers) Educational activities and programmes / Engagement, exploitation and social innovation: hold creative workshops for children inside museums (BP_003 / users: museum's curator); realising permanent exhibitions on the causes, contexts and consequences of the 20th century regimes in dissonant heritage assets, accompanied by special exhibitions, and offering study programmes for school classes and youth groups, as well as for adult groups, providing various insights within the framework of the educational forum (BP_015 / users: architect and municipal museums); realising exhibitions in dissonant heritage sites which document histories linked to it together with information stations along a prefigured route that can be experienced with an audio guide, generating a place to remember and reflect (BP_018 / users: architect and urban planner); organising workshops for CH (BP_033 / users: foundation, universities,
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institute for conservation and promotion of CH and architects); organising guided tours and educational activities aimed at raising heritage awareness and generating cultural centres of attraction (BP_034 / users: Region and foundation); combining cultural visit and restoration to share with visitors the discoveries of the shipyard and to show how the restoration team worked, also with tablets with information, streams showing the work process and staff trained specifically to resolve visitors' doubts about restoration (BP_037 / users: architects, civil engineer, restoration team and trained staff)