



# Un patrimoine pour l'avenir, une science pour le patrimoine

Heritage for the Future, Science for Heritage

**Une aventure européenne  
de la recherche et de l'innovation**

A European Adventure for Research and Innovation

**Colloque / Symposium**

15 - 16 Mars 2022 / March 15 - 16, 2022

**Louvre / Bibliothèque nationale de France / PARIS**

Un événement organisé dans le cadre  
de la présidence française du Conseil de l'Union européenne\*

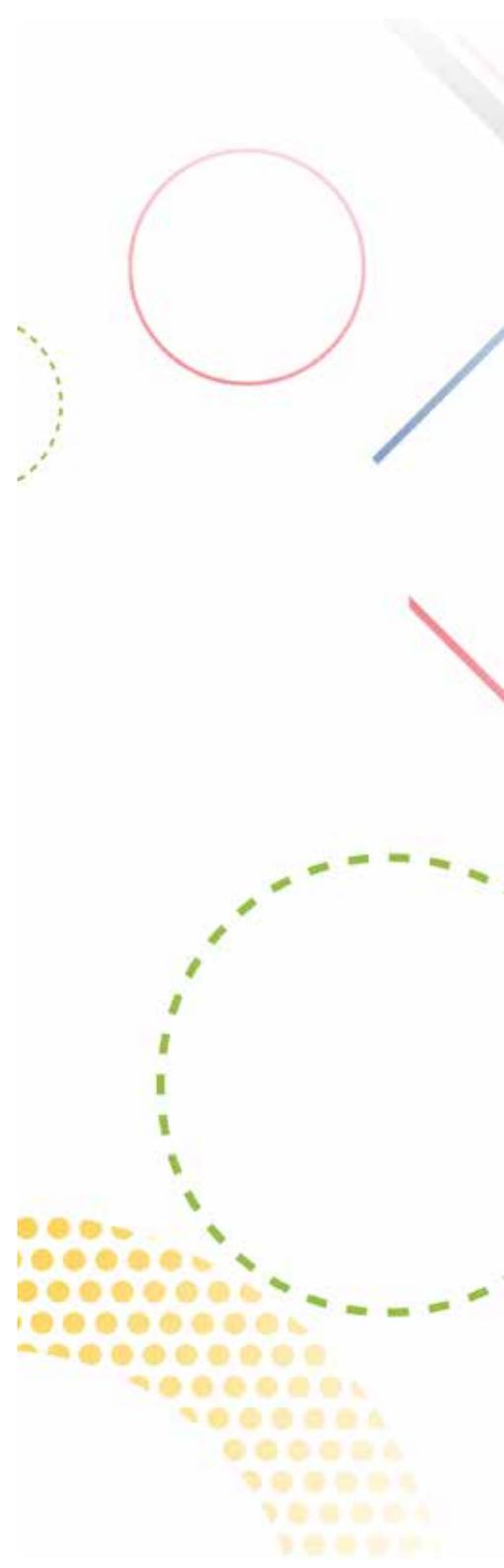


**This event is not organised by the French Government.**

**It is however authorised by the French Government to use the emblem of the French Presidency of the Council of the European Union.**

**This event is funded by the European Union. Views and opinions expressed in the framework of this event do not necessarily reflect those of the European Union and the European Commission. The European Union nor the European Commission can be held responsible for them.**

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## Heritage for the Future, Science for Heritage

### A European Adventure for Research and Innovation

*Within the framework of the French Presidency of the Council of the European Union, the Foundation for Heritage Science is organizing, with the support of the European Commission and in partnership with the French Ministry of Culture, the French National Centre for Scientific Research (CNRS) and the universities of Paris-Saclay and Cergy Paris, a two-day symposium event dedicated to heritage science in Europe.*

It will be held on the 15th and 16th of March 2022 in Paris.

The notion of cultural heritage has very ancient roots and, over the course of the history of Humanity, it has taken many different forms depending on historical periods, geographical areas and cultural contexts. Object of attachment, admiration and recognition, cement of identity but also target for destruction and hostage of political conflicts and ideological controversies, heritage has also been, for more than two centuries, a research subject. Archive often silent of past societies, cultures and technologies, the heritage object, taken in its broadest sense, must be decoded, preserved and enhanced by the cross-disciplines of humanities and social sciences, experimental sciences and, now, digital and engineering sciences. Today, heritage science encompasses a vast and interdisciplinary scientific domain that contributes to the identification, understanding, conservation and transmission of cultural heritage, whether tangible, intangible, natural or digital.

This concept has been built up over the past twenty years and has become an integral part of the European scientific ecosystem. Its robust and large structuring brings together researchers, heritage professionals, non-governmental organisations and associations that aim at transcending national visions and interests. The event will reflect this major evolution with ambitions to enable the setting up, in the coming years, of a Partnership within the Horizon Europe programme.

This wide-ranging event will showcase the contribution of heritage science - in all its diversity - in France and in Europe, its central role in responding to the major contemporary challenges - whether social, cultural, economic, political or environmental - at national and European level, as well as its articulation with the big European initiatives, such as the Green Deal, the EU's digital strategy, the measures in favour of the cultural and creative industries and the New European Bauhaus.

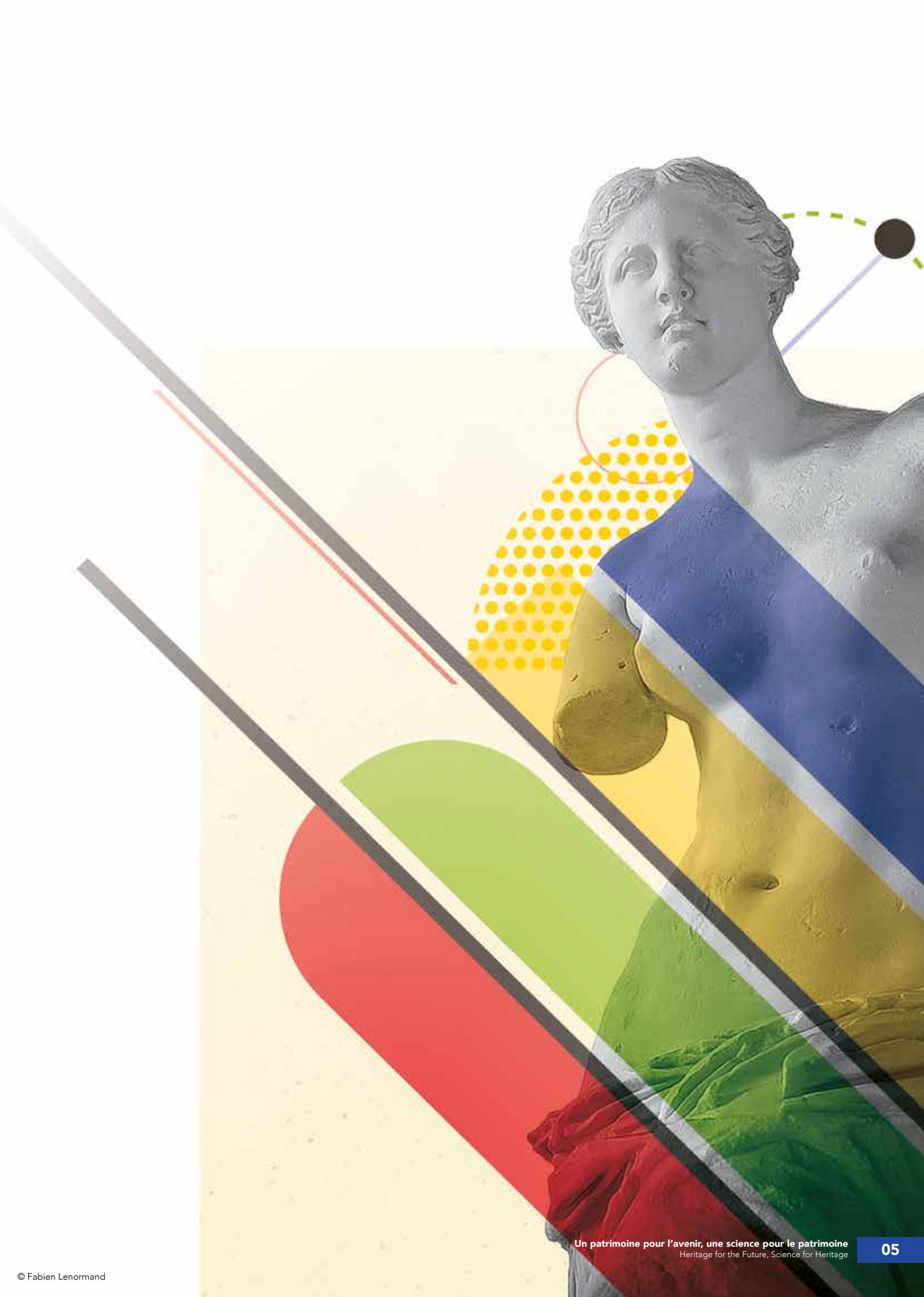
The event is structured around four themes: A reflexive heritage for a resilient society; Sustainable management of cultural heritage; Cultural heritage in a changing context; Cultural heritage facing climate and environmental change. They will be moderated by academics, professionals from the heritage sector and the cultural and creative industries, policy-makers, media actors. One will be able to listen to early career and senior researchers presenting the latest advances in heritage science, and to professionals sharing their experiences; to question society, identity and sustainable development issues; to call upon the notions of innovation and creativity; to forge links between past and future, as evoked by the very title of the event.

That the theme of heritage science has been selected in the framework of the events of the French Presidency of the Council of the European Union shows the extent to which cultural heritage is, for Europe, a factor of cohesion, identity, sharing and hope, beyond the political tensions and the pressures of the current health and environmental crises.

As President of the Foundation for Heritage Science, which is organizing these two days, I sincerely hope that this colloquium will fully meet its objectives of exchange and debate, and thus be a great success.

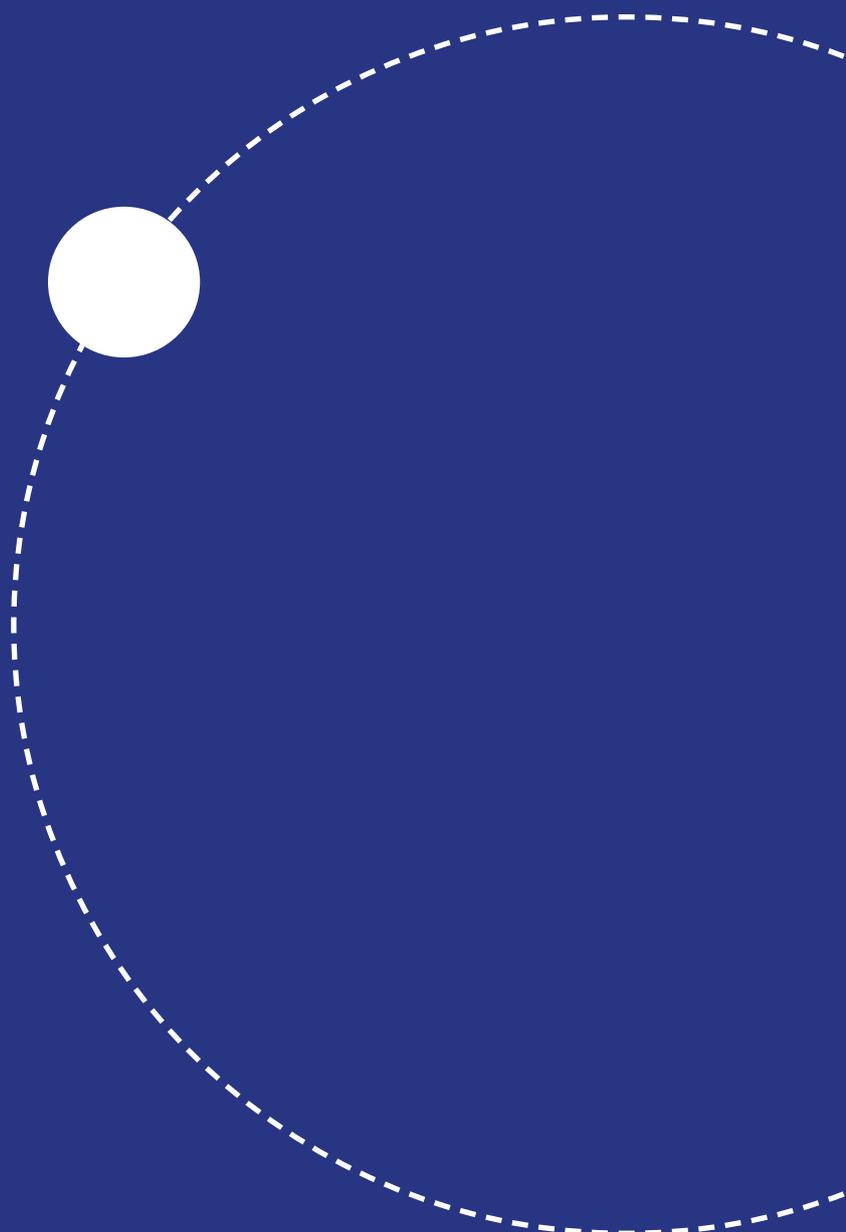


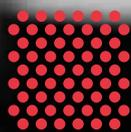
**Isabelle Pallot-Frossard**, General Heritage Curator,  
President of the Foundation for Heritage Science.





**THE FOUR  
MAIN THEMES**





## A reflective heritage for a resilient society

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## A reflective heritage for a resilient society

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Cultural heritage plays a significant role in how our societies come together and flourish. It is also inherent to how individuals find their place and forge themselves within a community. How does cultural heritage contribute to the creation of identities? To what extent can it be a driver for inclusion or exclusion? What are its different meanings? What are the challenges, the consequences of its conservation or, on the contrary, its endangerment? What are the interactions between cultural heritage and citizenship? How to facilitate access to the knowledge and data produced by heritage science?

The identification, appropriation and valorisation of cultural heritage can vary depending on the context. This implies that their ins and outs must be considered. What critical approaches can be elaborated to prevent its instrumentalisation? To nuance its interpretations? How can cultural heritage contribute to social cohesion, well-being, health, economic development?

Far from being immutable, cultural heritage is a concept that evolves like our societies. How to identify and select what is or will be cultural heritage? How to include citizens and local or national communities in that process? What challenges and opportunities arise from the adoption of new forms of heritage?

Finally, cultural heritage can also be apprehended in its capacity to dialogue with creation. How can it feed the processes of creation and innovation? Conversely, how can creation make the representations of cultural heritage evolve or contribute to revealing it?

**N.B** The four main themes of the symposium are from the Strategic Research and Innovation Agenda of the Joint Programming Initiative on Cultural Heritage and Global Change (JPI CH)



## Sustainable management of cultural heritage

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## Sustainable management of cultural heritage

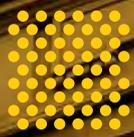
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This theme aims to investigate management strategies as well as methods of conservation of cultural heritage and its data.

The methods, technologies and tools associated with the preservation, restoration and transmission of cultural heritage are also at the core of this theme. What issues surround today's practices? How to find the right balance between use and protection? What are the materials, technologies, and innovative methods to improve the preservation of cultural heritage? What tools and measures facilitate the understanding of cultural heritage? What opportunities and challenges arise from the use of digital technologies and artificial intelligence?

Finally, sustainable management of cultural heritage also implies securing the future of the data and archives produced to enhance its understanding and preservation. How to preserve them in the long term? How to guarantee the sharing and interoperability of them?

**N.B** The four main themes of the symposium are from the Strategic Research and Innovation Agenda of the Joint Programming Initiative on Cultural Heritage and Global Change (JPI CH)



## Cultural heritage in a changing context

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## Cultural heritage in a changing context

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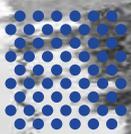
Cultural heritage must be apprehended in a physical, demographic, social, environmental, economic, political, or cultural context that can change rapidly and on a large scale.

This theme will address territorial and demographic changes that present threats as well as opportunities. How to preserve and promote heritage in dynamic natural environments? How can urbanisation, population increase and decline, industrialisation and deindustrialisation, or intensive farming practices challenge conservation of built heritage, cultural landscapes, or local traditions? How can cultural heritage be integrated into urban and rural development policies? What stories, narratives and motives are behind its transformation?

Another important issue concerns the conditions and consequences of the access to cultural heritage. For instance, what are the challenges caused by mass tourism?



**N.B** The four main themes of the symposium are from the Strategic Research and Innovation Agenda of the Joint Programming Initiative on Cultural Heritage and Global Change (JPI CH)



## Cultural heritage facing climate and environmental change

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## Cultural heritage facing climate and environmental change

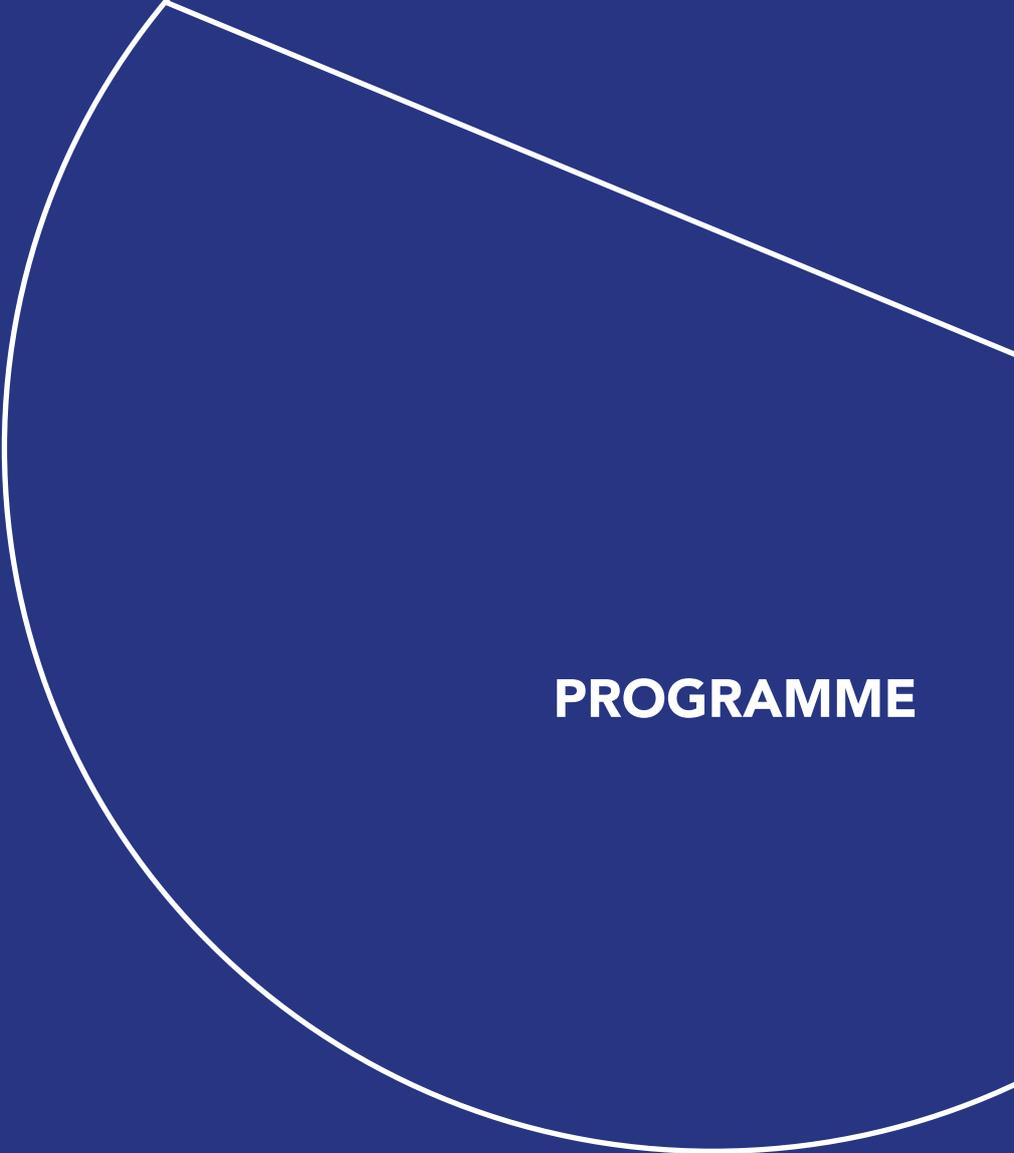
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Climate change and the deterioration of the environment is a major challenge for our societies. These must engage in fundamental transformations to mitigate its effects and adapt to its impact.

This theme will address the effects of climate change on cultural heritage as well as the adaptation strategies that need to be implemented. What tools and methodologies allow to assess its impact and how to mitigate it? How to implement ecologically responsible cultural heritage practices? Which past adaptation strategie(s) could help to improve the resilience of our societies?

Cultural heritage can also be a resource for mitigating the effects of climate change and contributing to sustainable development. What effect(s) can the (re)use of cultural heritage have on the environment? How can cultural heritage knowledge and data contribute to contribute to the study of climate but also to the emergence of post-carbon societies? What opportunities for creation could arise from it?

N.B The four main themes of the symposium are from the Strategic Research and Innovation Agenda of the Joint Programming Initiative on Cultural Heritage and Global Change (JPI CH)



**PROGRAMME**



## TUESDAY 15 MARCH 2022

### The Musée du Louvre

Ecole du Louvre, Centre for Research and Restoration of Museums of France (C2RMF)

<b>From 08:15</b>	<b>Registration and welcome coffee</b>			
09:30 - 10:15	Welcome addresses <small>MUSÉE DU LOUVRE - MICHEL LALOTTE AUDITORIUM</small>			
10:15 - 10:30	Introductory keynote speech <small>MUSÉE DU LOUVRE - MICHEL LALOTTE AUDITORIUM</small>			
10:30 - 11:30	Preserving and mobilising cultural heritage in the face of climate change: the role of research and innovation in an emergency context. <b>Plenary session 1</b> <small>MUSÉE DU LOUVRE - MICHEL LALOTTE AUDITORIUM</small>			
<b>11:30 - 12:15</b>	<b>Coffee break</b>			
12:15 - 13:15	Heritage science and digital transformation: challenges and opportunities. <b>Plenary session 2</b> <small>MUSÉE DU LOUVRE - MICHEL LALOTTE AUDITORIUM</small>			
<b>13:15 - 14:45</b>	<b>Lunch</b>			
14:45 - 15:45	<b>Round tables</b>			
	The ever-expanding domain of patrimonialisation: challenges and perspectives. <small>RT 1.1 MUSÉE DU LOUVRE MICHEL LALOTTE AUDITORIUM</small>	Digital modelling: development and application of complex tools. <small>RT 1.2 ECOLE DU LOUVRE DÜRER AMPHITHEATRE</small>	Towards new experience of heritage: reflections on innovative mediations. <small>RT 1.3 ECOLE DU LOUVRE MICHEL-ANGE AMPHITHEATRE</small>	Preserving cultural heritage: new materials and innovative technologies in perspective. <small>RT 1.4 C2RMF PALISSY AUDITORIUM</small>
16:10 - 17:20	<b>Round tables</b>			
	Building the future in the light of the past: the social, economic, political and educational value of cultural heritage. <small>RT 2.1 MUSÉE DU LOUVRE MICHEL LALOTTE AUDITORIUM</small>	Urban transformation and heritage in the light of political and societal issues. <small>RT 2.2 ECOLE DU LOUVRE DÜRER AMPHITHEATRE</small>	Identity and social issues: identifying, interpreting, transmitting. <small>RT 2.3 ECOLE DU LOUVRE MICHEL-ANGE AMPHITHEATRE</small>	Adapting cultural heritage to climate change: from risk assessment to the implementation of solutions. <small>RT 2.4 C2RMF PALISSY AUDITORIUM</small>
<b>From 17:20</b>	<b>Coffee break</b>			

### Social event - The Centre Pompidou

A social event will be held at the Centre Pompidou on the evening of March 15 for on-site participants to share a convivial moment. Journalists who wish to participate must contact the press officer

A reflective heritage for a resilient society

Sustainable management of cultural heritage

Cultural heritage in a changing context

Cultural heritage facing climate and environmental change

## WEDNESDAY 16 MARCH

### Bibliothèque nationale de France (BnF) - François Mitterrand site

National library of France

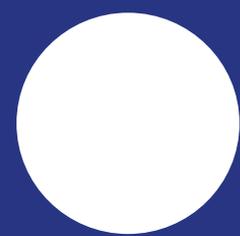
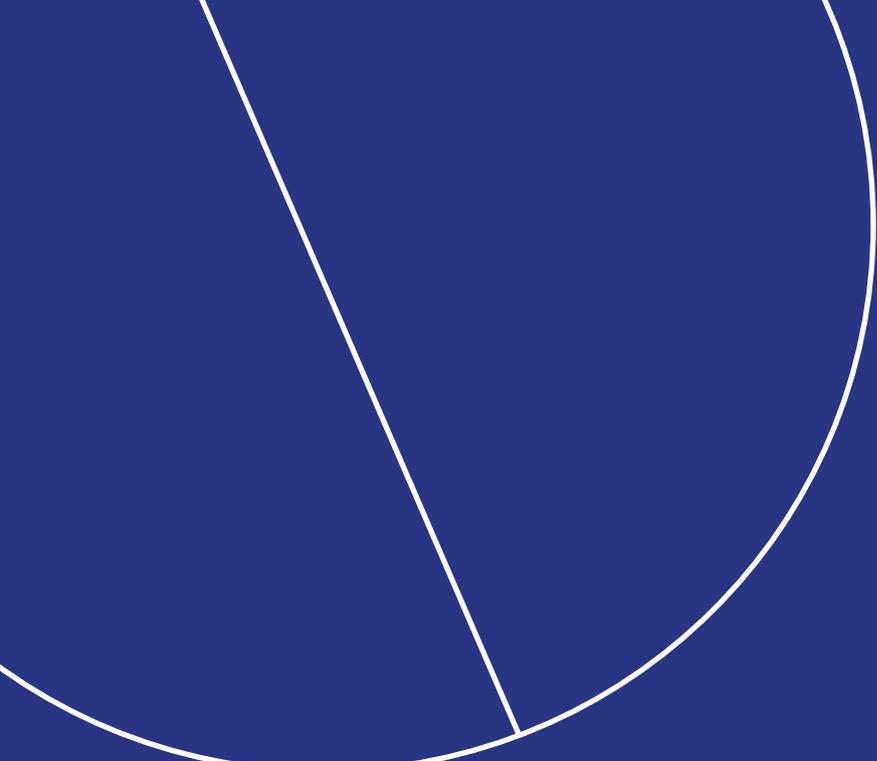
<b>From 08:00</b>	<b>Registration and welcome coffee</b>			
09:00 - 10:00	<b>Round tables</b>			
	From decline to revival: cultural heritage and urban regeneration. <small>RT 3.1 AUDITORIUM</small>	When culture meets nature: cultural landscapes in question. <small>RT 3.2 ROOM 70</small>	Challenges and perspectives for the sustainable rehabilitation and renovation <small>RT 3.3 BELVÉDÈRE 1</small>	Tangible heritage and green conservation: practices in question. <small>RT 3.4 BELVÉDÈRE 2</small>
10:20 - 11:20	<b>Round tables</b>			
	Towards inclusive and socially engaged heritage practices. <small>RT 4.1 AUDITORIUM</small>	Digital heritage: frameworks and practices for a sustainable management. <small>RT 4.2 BELVÉDÈRE 1</small>	Learning from the past: mobilising cultural heritage for a sustainable future. <small>RT 4.3 BELVÉDÈRE 2</small>	
<b>11:20 - 11:55</b>	<b>Coffee break</b>			
11:55 - 12:05	Welcome address by the official representatives			
12:05 - 13:05	Training heritage stakeholders: challenges and prospects. <b>Plenary session 3</b> <span style="float: right;"><small>AUDITORIUM</small></span>			
<b>13:05 - 14:15</b>	<b>Lunch</b>			
14:15 - 15:15	Cultural and creatives industries, a new field of application for heritage science. <b>Plenary session 4</b> <span style="float: right;"><small>AUDITORIUM</small></span>			
15:15 - 16:15	The contribution of heritage science to the New European Bauhaus. <b>Plenary session 5</b> <span style="float: right;"><small>AUDITORIUM</small></span>			
16:15 - 17:30	Heritage science, what perspectives in France and in Europe? <b>Summary of the key messages and closing session</b> <span style="float: right;"><small>AUDITORIUM</small></span>			
<b>17:30 - 18:30</b>	<b>Farewell drink</b>			

A reflective heritage for a resilient society

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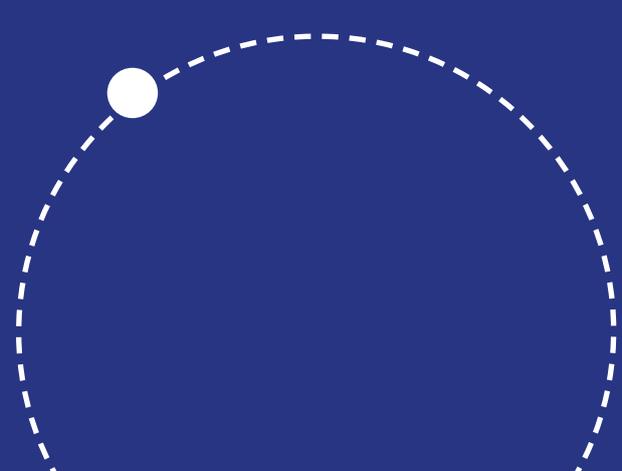
Cultural heritage facing climate and environmental change



**TUESDAY 15 MARCH 2022**

**The Musée du Louvre**

Ecole du Louvre, Centre for Research and Restoration of Museums of France (C2RMF)



## WELCOME ADDRESSES

WELCOME SPEECH

**Laurence DES CARS**

President-Director of the Musée du Louvre

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OPENING

**Mariya GABRIEL**

European Commissioner for Innovation, Research, Culture, Education and Youth

**Roselyne BACHELOT-NARQUIN**

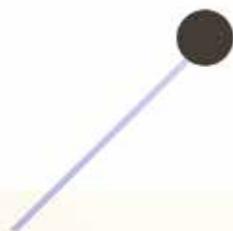
Minister of Culture

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INTRODUCTION

**Isabelle PALLOT-FROSSARD**

President of the Foundation for Heritage Science

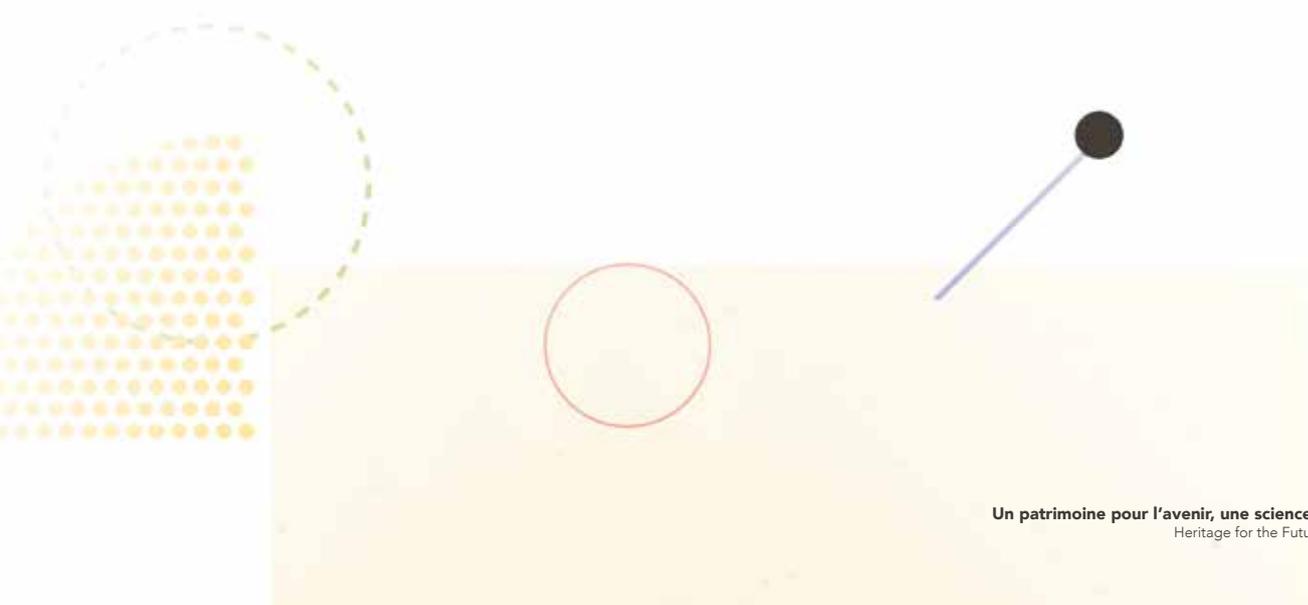


## INTRODUCTORY KEYNOTE SPEECH



### **Christian EHLER**

German member of the European Parliament for the EPP Group  
Rapporteur on Horizon Europe legislation.





## Sarah HUGOUNENQ

Independent Journalist specialising in arts sponsorship, cultural funding and heritage policies.  
Teacher at the Ecole du Louvre and PhD Student in Social Sciences.

SYMPOSIUM FACILITATOR AND PLENARY SESSIONS MODERATOR

Plenary session 1:

## Preserving and Mobilising Cultural Heritage in the Face of Climate Change: The Role of Research and Innovation in an Emergency Context.

As one of the major challenges of our time, climate change compels our societies to engage in profound transformations to counter its effects and adapt. In such a context, cultural heritage is equally part of the problem and of the solution. As cultural heritage, tangible, or intangible is increasingly weakened or even destroyed by the effects of global warming, heritage science is engaged in developing new monitoring, prevention, and intervention tools to ensure its transmission to future generations. Heritage also offers a whole range of resources for green development, be it the reuse of old buildings, the reactivation of ecologically virtuous traditional know-how or the information it provides on the climates of the past. In that respect, heritage science has all its place in the implementation of the European Green Deal.



## Johanna LEISSNER

Scientific Representative for Fraunhofer,  
Chair of the European Union Open Method of Coordination (OMC)  
Group 'Cultural Heritage Resilience for Climate Change',  
Member of European Union Expert Group 'Cultural Heritage',  
German Research Alliance Cultural Heritage and Fraunhofer Sustainability Network.



## Frank McGOVERN

Chief Climate Scientist at Environmental Protection Agency (EPA) Ireland,  
Chair of the European Joint Programming Initiative JPI Climate.



## Giuseppina PADELETTI

Research Director at the National Research Council (CNR), Italy.



## Andrew POTTS

Coordinator, Climate Heritage Network Secretariat.



## Katherine WARREN

Head of History, Heritage, Languages and Literature,  
Arts and Humanities Research Council (AHRC), United-Kingdom,  
Vice-Chair of the European Joint Programming Initiative JPI Cultural Heritage.

Plenary session 2:

## Heritage Science and Digital Transformation: Challenges and Opportunities.

Heritage actors have long been highly committed to digital transformation, whether in terms of inventory databases, scientific imagery, investigation, or mediation devices. At the crossroads of history, archaeology, chemistry, physics and digital sciences, innovative technologies and methods are revolutionising the knowledge, conservation, restoration, and mediation of cultural heritage and are opening up many new perspectives. The most recent advances in imaging allow, for instance, the creation of digital duplicates that can be used for research, management, and mediation of heritage. Today, the exponential number of data produced, their long-term conservation and accessibility within the framework of open science require the implementation of adapted tools at the European level.



### Livio DE LUCA

Research Director at the National Centre for Scientific Research (CNRS), France.  
Director of the Models and Simulations for Architecture and Heritage laboratory (MAP).



### Sorin HERMON

Associate Professor at the Cyprus Institute.



### Roberto SCOPIGNO

Director of the Institute of Information Science and Technologies,  
National Research Council (ISTI-CNR), Italy.



### Martin ZAVESKY

Digital Strategy Officer,  
Staatliche Kunstsammlungen Dresden, Germany.



## A reflective heritage for a resilient society

RT 1.1 :

### The Ever-Expanding Domain of Patrimonialisation: Challenges and Perspectives.



© Robertas Dabkevicius

MODERATOR

#### Marija DRÉMAITÉ

Professor and a Chair of Cultural Heritage Master studies programme. Vilnius University, Lithuania.



#### Cecilia BEMBIBRE

Lecturer in Sustainable Heritage,  
Institute for Sustainable Heritage, University College London, United-Kingdom.  
Member of the Horizon 2020 Odeuropa project.

#### **A Nose-First Approach to History: Challenges and Opportunities for Heritage Scientists.**

After decades of engaging with heritage primarily through our eyes, museums are discovering the value of a multisensory approach to collection curation and interpretation. Smells, for example, are linked to aspects of heritage like traditions and tourism; they stand as symbols of a shared past and enhance visitors' museum experience. This presentation will identify opportunities to develop a heritage 'nose-first' approach, review methodological challenges for heritage smell preservation and presentation and reveal some of the concerns of heritage professionals around challenges posed by the introduction of scents as new VOCs in the gallery space.



#### Stéphane CHAUDIRON

Professor in Information and Communication Sciences at Lille University.  
Member of the GERiCO laboratory, France.

#### **The Contribution of Digital Technology for the Preservation, Enhancement and Transmission of the Mining Heritage of Hauts-de-France.**

This presentation will introduce the results of the ANR Mémomines project (<https://memomines.hypotheses.org/>), whose objective is to participate in the preservation of the mining heritage of the Hauts-de-France and its valorisation for various audiences. The project has created an indexed and annotated audiovisual corpus that can be used as digital resources for research projects, territorial valorisation and cultural mediation. A thesaurus and a domain ontology have been created to organise, describe and access these contents. The project has also allowed the realisation of innovative visit devices in 3D simulation and augmented reality.



#### Aymeric GAUBERT

Doctoral Student in History and Art History,  
University of Tours - Centre d'Études Supérieures de la Renaissance, France.

#### **The Patrimonialization of Graffiti: from the Archaeology of the Trace to Digital Humanities.**

Graffiti has become a true subject for research and is now at the heart of an increasing valorisation. Like any patrimonialisation process, this enhancement raises three fundamental questions: what to preserve? Why? And how? The Graffiti of yesterday and today is a historical source, sometimes associated with artistic practice. It is also a gesture to be read, interpreted and interrogated. It refers to a set of traces and reveals a centuries-old graffitiological reflex. At the crossroads of history, art history, heritage science and anthropology, Graffiti is worthy of interest, conservation and scientific or even digital mediation.



#### Marco ROMAGNOLI

Doctoral Student in Ethnology and Heritage, Laval University, Québec, Canada.

#### **Food on UNESCO's List: Challenges of a Heritage Aporia.**

The presentation proposes to illustrate the process of patrimonialisation at UNESCO starting from the examination of the candidatures having food as a heritage element. Divided into three parts, it will begin by exposing the process of patrimonialisation of food at UNESCO over the last decade, to continue with the impacts on the field of the patrimonialisation of the Mediterranean diet, and finish by providing the major issues and some avenues to solve the challenge posed by the cultural officialisation of food at UNESCO.



## Sustainable management of cultural heritage

RT 1.2 :

### Digital Modelling: Development and Application of Complex Tools.U

MODERATOR



#### Xavier RODIER

Director of the Maison des Sciences de l'Homme Val de Loire,  
HDR Research Engineer at the National Centre for Scientific Research (CNRS), France.  
Member of the Archéologie et Territoires Laboratory (CITERES).



#### Emanuel DEMETRESCU

Researcher at the Institute of Heritage Science,  
National Research Council (ISPC-CNR), Italy.

#### Formal Representation of Heterogeneous Data for Interoperability and Collaborative Virtual Reconstruction in Cultural Heritage. The Case Study of the Roman Amphitheatre of Catania.

Virtual reconstructions are a complex scientific process with a simple output: a reconstructive image of a site as it must have appeared in Antiquity. A transformation of heterogeneous data into a reconstructive hypothesis is a process that involves the skills of researchers with different cultural backgrounds and a mix of methods and tools from the relevant disciplines (archaeology, semantics, information science, computer graphics). The Extended Matrix approach applied to the Theatre of Catania is a formal language and a template to visualise a knowledge network of the sources of the interpretations and results of a reconstructive process.



#### Armita EGHBALI

MSc Student in Conservation and Regeneration of Architectural Heritage,  
Tehran University, Iran.

#### Adaptive Reuse as a Strategy towards Conservation: Using HBIM Tools for Contemporary Architecture in Iran.

The need to safeguard and preserve architectural heritage increases significantly in Iran, where the number of historical buildings is considerable. Planning new practical and trendy purposes for abandoned structures expands their life cycle and brings up its own sustainable merits. As for other conservation projects, documentation, pathology, and planning are the steps that must be undertaken. Accordingly, in light of the HBIM (Heritage Building Information Modelling) approach, all tasks can be fulfilled in a heterogeneous way. Also, integrating GIS, photogrammetry, and laser scanning with the HBIM results in more accurate findings. In this presentation, a contemporary Persian building has been examined for new use with the above-mentioned strategy.



#### Elena GIGLIARELLI

Researcher at the Institute of Heritage Science,  
National Research Council (ISPC-CNR), Italy.

#### A Methodology for Built Heritage Energy and Environmental Improvement: The BEEP Project.

The BEEP project aims to strengthen the use of Building Information Modeling to improve energy efficiency of publicly owned historical heritage. The main result of the project is an innovative methodology based on the integration of emerging technologies tested on historic public buildings. Through this technology, it is possible to increase the efficiency of the entire building design process by working on shared models that allow for greater control over critical issues by reducing uncertainties. The selected buildings have great architectural value and include the headquarters of important public institutions. They will serve as an example and incentive for the private sector.



## Sustainable management of cultural heritage

RT 1.3 :

### Towards New Experiences of Heritage: Reflections on Innovative Mediations.



MODERATOR

#### Ana AMENDOEIRA

Regional Director of Culture, Regional Committee of UNESCO, Ministry of Culture, Portugal.



#### Alessandra MARASCO

Senior Researcher at the Institute for Research on Innovation and Services for Development, National Research Council (IRISS-CNR), Italy.

#### Innovative Approaches for Audience Engagement: The Case of the Opera Escape Room.

The presentation investigates the potential of real-life escape rooms for audience engagement with melodrama through the creation and investigation of an escape room themed La Traviata. Escape rooms have gained interest in heritage to provide engaging experiences for younger generations, and they have the potential to promote intangible heritage, a prime case being opera. The research presented is one of the first to empirically explore players' experience in real-life escape rooms in heritage sites. It provides evidence of their flow experience, positive attitudes and behavioural intentions toward the featured opera. Results are relevant for institutions seeking to develop innovative approaches for audience engagement.



#### Marie-Alix MOLINIÉ-ANDLAUER

Post-Doctoral Fellow in Digital Humanities.

Attached to GRESEC at Grenoble-Alpes University,

Member of the Laboratory 'Médiations - sciences des lieux, sciences des liens', Sorbonne University, France.

#### Heritage and Digital Technology: Challenges and Limits. Crossing Views between le Louvre and the Micro-Folies.

This presentation explores the increasing use of digital technology in experimenting and adapting museums to 'current standards'. The main hypothesis is that the impossibility of building large museums in all territories and the desire for access to universal works of art contribute to creating a new space, the virtual space, which transcends the very idea of homogenising cultural codes. The Louvre and the Micro-Folies cases are in line with each other since the Louvre participates in the deployment of the Micro-Folies at the same time that the latter become laboratories for rethinking the museum experience.



#### Sylvie SAGNES

Researcher at the National Centre for Scientific Research (CNRS) in Ethnology, UMR Héritages (CY, CNRS, MC), France.

#### Testing the Anamorphosis: The Artist, the Monument, the Inhabitant.

To celebrate the 20th anniversary of the inscription of the Cité de Carcassonne on the World Heritage List, the Centre des Monuments Nationaux called on the artist Felice Varini in 2018. His installation 'Concentriques excentriques' aimed to establish a dialogue between creation and heritage and consisted of strips of yellow paint applied directly to the ramparts. Instead, it sparked controversy, in which the inhabitants took part to show their attachment to the image of the citadel, a part of the monument which they can still fully enjoy, at a time when mass tourism is depriving them of their heritage.



#### Philippe VENDRIX

Research Director at the National Centre for Scientific Research (CNRS) in Musicology, France.

#### Music in Cultural Heritage: Issues and Perspectives.

The Ricercar Early Music Lab of the Centre d'Etudes Supérieures de la Renaissance (Tours) has attempted to respond to challenges posed by the integration of the musical dimension in a heritage site, the understanding of musicological work on heritage with a large public, both in museums and for exhibitions. Experiments have been carried out on the construction of a listening device for a musical heritage and the impact of spaces dedicated to music in royal residences. These achievements can be seen on <https://virtual-music-heritage.fr/>, and some new projects, recently opened, allow us to question how music can occupy a place in the discovery of cultural heritage.



## Sustainable management of cultural heritage

RT 1.4 :

### Preserving Cultural Heritage: New Materials and Innovative Technologies in Perspective.



MODERATOR

#### Isabelle PALLOT-FROSSARD

General Heritage Curator, President of the Foundation for Heritage Science, France.



#### Bertrand LAVÉDRINE

Professor at the National Museum of Natural History, Paris, France.

#### The Development of Innovative Porous Materials for the Sustainable Management of Cultural and Natural Heritage.

Since the end of the 1990s, hybrid porous solids, commonly called Metal Organic Frameworks or MOFs, have been proposed mainly for adsorption (H<sub>2</sub>, CH<sub>4</sub>...) or gas separation (CO<sub>2</sub>/N<sub>2</sub>...). Since then, they have been proposed for other applications, for example in biomedicine and more recently to preserve cultural heritage. Thus, MOFs with a high affinity for capturing acetic acid have been shaped and tested for applications in archives and museums to prevent the degradation of films or papers.



#### Dominique MARTOS-LEVIF

Research Engineer and Head of the painting restoration workshops, Centre for Research and Restoration of Museums of France (C2RMF).

#### New Approach to Cleaning: Example of the Frames of the Issenheim Altarpiece, the Laser in Question.

During the restoration of Matthias Grünewald's Issenheim altarpiece, the original polychromy of the frames was removed by laser. A campaign of analyses and tests was organised beforehand by the C2RMF in collaboration with the team of restorers and Anna Brunetto, an Italian restorer specialising in the use of lasers in the heritage field, to evaluate the effectiveness and harmlessness of the treatment. This intervention aims to present the laser as a tool likely to respond to the problems of cleaning coloured layers and address the many questions regarding access to equipment and training for heritage restorers.



#### Delphine NEFF

Research Director at the Alternative Energies and Atomic Energy Commission (CEA), France.

#### From Research Laboratory to End-Users, the Long Process to Develop Sustainable Protocols for the Protection of Cultural Heritage Metals.

The development of treatments efficient for the long-term preservation of heritage metals is at stake and necessitate close collaboration between research and conservation scientists, conservators and curators, to identify a regular issue through networking activities and determine a suitable research strategy. Based on observations on real artefacts to apprehend the heterogeneity of the materials, a thorough study of the physicochemical processes involved is crucial. During this presentation, the different steps of protocol developments are described, from the scientific question elaborated with conservators and scientists to the experimental testing in the research laboratories and with the end-users.



#### Ina REICHE

Research Director in the Chemistry of Ancient Materials, Director of the FR3506 New AGLAE (CNRS - Ministry of Culture), France.

#### The Original Appearance and Beauty of Ancient Paintings Virtually Reconstructed.

As part of questions about methods of cultural heritage conservation, transdisciplinary research is being conducted to develop a set of analytical processes allowing to reconstruct the appearances of historical paintings at different moments in their history. This reconstruction is based on a very detailed knowledge of the materiality of the works, their state of conservation and the conditions of conservation. These analyses, necessarily non-invasive for precious artworks, are accompanied by virtual modelling of the evolution of their materials composition. The example of a painting currently being restored will illustrate this approach.



## A reflective heritage for a resilient society

RT 2.1 :

### Building the Future in the Light of the Past: The Social, Economic, Political and Educational Value of Cultural Heritage.

MODERATOR



#### François ROBINET

Historian and Lecturer at the University of Versailles-Saint-Quentin-en-Yvelines (UVSQ),  
Director of the Graduate School Humanities - Heritage Science of the University of Paris-Saclay,  
Member of the Centre d'histoire culturelle des sociétés contemporaines, France



#### Alain BLAYO

Auto-entrepreneur and Communication Advisor, France.

#### How Can Mediterranean Fishermen Embody an Economic Model for the Future?

In the French Mediterranean, fishermen are organised into prud'homies. A prud'homie ensures the fair administration of the resource harvest and represents the community on its territory. Its sworn leaders are elected for three years. Today, there are 33 prud'homies from Spain to Italy, including Corsica. The prud'homale practice is an element of intangible cultural heritage and a common good inherited from a centuries-old tradition. It constitutes an element of identity for fishing communities that, in the face of numerous social, environmental, economic and political challenges, demonstrates its relevance in modelling future projects.



#### Tor Einar FAGERLAND

Associate Professor at the Norwegian University of Science and Technology, Norway.

#### Terror and the Process of Creating a Space for Memory.

On 22 July 2011, a Norwegian terrorist murdered eight people in the Government Centre in Oslo and 69 young people on the tiny island of Utøya. The memorial processes at Utøya and Oslo were contested, and difficult compromises were made. Eventually, all groups were able to move forward. As a response to the many terrorist attacks in France, President Macron called in 2018 for a 'memorial museum of terrorism'. In 2019 a designated French team visited Utøya and Oslo to develop a roadmap for further cooperation. This presentation reflects on international cooperation, the physical spaces and the negotiations between different stakeholders.



#### Carlo GUADAGNO

Independent Researcher and Climate Change Activist.

#### Cultural Heritage in the 21st Century: Driver towards What?

This presentation critically frames cultural heritage as a legacy requiring profound understanding as it shapes decisions for and of the future, influencing several societal and global challenges. The discussion will encompass the social and participative role of heritage to clarify its inner polysemic nature and resources and unravel existing contradictions in its overall management, preservation and exploitation. Finally, the employment of cultural heritage as a driver of the global tourism industry and the capitalist system will be evidenced, claiming heritage as a «fundamental right of people» capable of empowering societies, boosting mutual understanding, inclusion and self-government.

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## A reflective heritage for a resilient society

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### Stéphane OLIVESI

Professor at Paris-Saclay University (UVSQ),  
Centre d'histoire culturelle des sociétés contemporaines (CHCSC), France.

#### **No Memory, From Forgetting Heritage to Local Heritage-making Strategies.**

This presentation questions the relationship to local heritage, the conditions of transmission of memory, the relationship of identity to the place and the reasons why the past is or is not the object of symbolic appropriation. Local heritage inhabits memories in various forms, is invested with a value and transmitted or, conversely, neglected, forgotten, or even occulted. Rather than analysing an established heritage process, it is proposed to probe its reverse or negative side. Why don't the local inhabitants, individually or collectively, mobilise to have the historical importance and heritage value of specific sites recognised? Why don't they keep alive a memory that is part of the local identity, to find themselves collectively in these material traces and symbols of their past? This ethnographic investigation is based on biographical and memory sources and contemporary data collected through observation, documentation and interviews. It aims to show that the shadow of history is visible behind the individual relationship to the past.



### Zoï TSIRTSONI

Researcher at the National Centre for Scientific Research (CNRS),  
Joint laboratory Archéologies et Sciences de l'Antiquité, Nanterre, France.

#### **Prehistoric Vestiges in a Country Proud of Its Antiquity: The Innovative and Federating Potential of an Unacknowledged European/World Heritage.**

Based on the case of Philippi-Dikili Tash, an important Neolithic and Bronze Age settlement in northern Greece, the presentation will discuss the challenges of presenting prehistoric vestiges to a larger public, nourished with images and discourses referring to a more monumental and glorious ancient past. It will focus on the 'international' character of the achievements of prehistoric populations, the connection with natural environment and resources - some of which are presently threatened or lost - and finally on the a-temporal character of some of the solutions adopted by prehistoric people, and their utility as sources of inspiration for modern farmers, builders, or artists.



## Cultural heritage in a changing context

RT 2.2 :

### Urban Transformation and Heritage in the Light of Political and Societal Issues.



MODERATOR

#### Marie GAILLE

Director of the Institute of Humanities and Social Sciences (InSHS),  
National Centre for Scientific Research (CNRS), France.



#### Elisa BROCCOLI

Post-Doctoral Research Fellow in Archaeology and Post-Classical Antiquities,  
Florence University, Italy.

#### **Towards Sustainable New 'Urban Stories'. Light Archaeology as a Tool to Map the Historical Transformations across Time and Space.**

Historical transformation is a value that we need to sustain. This is the core concept of the JPI Deep Cities - CURBATHERI international project, which, through cross-cutting research for comparable analysis in Norway, UK, Italy and Spain, is developing a management toolbox 'to facilitate the conceptualisation of heritage values among the stakeholders for the prioritisation of best planning solutions'. To model the material changes of an urban area across time and space, the University of Florence team proposes the 'Light Archaeology' tool, contributing to the understanding of the deep history of the city to add new 'urban stories' successfully.



#### Rachel MEIN

Architecture MSc Student at the Technical University of Delft, The Netherlands.

#### **Methodology for a User Experience-Based Design of the Public Space: The Case of the V&D Haarlem.**

Urban public spaces provide opportunities to interact with the community. To prevent these from being lost, the focus needs to shift to the total experience of its users. Using the national heritage V&D Haarlem as a case study, this presentation discusses a methodology for designing user experience-based public spaces that reactivate vacant heritage. This method includes historical and urban analysis and field observations of quality criteria for the users. The results provide guidelines for integrating user experience into the redesign, preparing cities for a sustainable future while preserving their valuable heritage.



#### Milena VUKMIROVIĆ

Associate Professor in Urban Design,  
Belgrade University, School of Forestry, Serbia.

#### **Populist Distortion of the Cultural Heritage in Changing Context. Savski Square, Belgrade.**

Belgrade characterises a combination of different influences that can be read in its physical structure. Construction of the railway was the most important aspect of the modernisation of Belgrade, while the area of the Sava slope became one of its most developed parts with Sava Square. The purpose of this presentation is to present the actual transformation of Sava Square with a particular interest placed on the reshaping of the historical narrative combining the modernistic backbones of Belgrade with historical figures that are not related to this space or its history. It will also discuss the current preservation of urban ambient entities.



## A reflective heritage for a resilient society

RT 2.3 :

### Identity and Social Issues: Identifying, Interpreting, Transmitting.



MODERATOR

**Neil FORBES**

Professor and Director for Creative Cultures, Coventry University, United-Kingdom.



**Inger BIRKELAND**

Professor in Human Geography at University of South-Eastern Norway.

#### World Heritage and Challenges of Multivocality.

The presentation will discuss dilemmas and challenges concerning pluralism, multivocality and inclusive social development in one complex World Heritage site: Rjukan-Notodden Industrial Heritage Site in Norway. It will explore multivocality as a key concept for heritage research for the future following a crisis of voice and outline its contribution, in particular for improving practices and policies for reflexive World Heritage management. Issues covered are place-making, identity-formation, ownership feelings, long-term conservation, intergenerational equity, and cultural sustainability.



**Maja GORI**

Researcher at the Institute of Heritage Science,  
National Research Council (ISPC-CNR), Italy.

#### What does 'Sustainable Heritage' Mean? The Lesson Learned from Western Balkan Archaeology.

Western Balkans represent a key area for Europe and its heritage policies, both because the Western Balkan States are gradually being integrated into the European Union and because, during the 1990s Yugoslav wars, cultural heritage was abundantly used to legitimise political and territorial claims. Different types of appropriation of the past in the form of archaeological discourses reflected indeed power struggles centred on nation and identity building (Gori 2017). Focusing instead on 'multilayered' and segmentary identities, this presentation will explore different 'uses of the past' to promote inclusivity and socio-political sustainability of archaeological heritage.



**Anne HERTZOG**

Lecturer in Geography at CY Cergy Paris University,  
MRTE laboratory, France.

#### On War Heritage in Greece and France. Discussing Negative Heritage for the Future.

The contemporary resurgence of nationalism in Europe raises questions about the role of war heritage sites and museums in present societies. The question becomes all the more sensitive as some of them propose patriotic/nationalistic approaches sometimes inherited from authoritarian regimes, like some Greek war museums. Managed by the army and concentrated in the border regions, these museums reflect a vision that is spatially peripheral but culturally hegemonic in the absence of an alternative war museography in Greece. This case leads us to discuss more broadly the place of so-called «negative» heritage and the plurality of values and uses associated with it today.



**Valérie TESNIÈRE**

Director of La Contemporaine, Paris Nanterre University, France.

#### L'Atelier de l'Histoire : A New Museum in Paris Nanterre University.

La contemporaine (Paris Nanterre University) opened a university museum in 2021. The permanent exhibition of this century-old institution, L'Atelier de l'histoire, questions how documents acquire the status of historical archives, the work of collecting which is a permanent re-creation fruit of the relationship between citizens and academic researchers. How do documents that received little attention until then become essential media for understanding a society's relationship to its history and its complex identity? Today, in La contemporaine, citizens and researchers, students and curators still work together to collect and provide new sources for history, including digital ones.



## Cultural heritage facing climate and environmental change

RT 2.4 :

### Adapting Cultural Heritage for Climate Change: From Vulnerability Assessment to Climate Planning.



MODERATOR

#### Matija STRLIČ

Professor of Heritage Science at University College London, United-Kingdom.  
Professor of Analytical Chemistry at University of Ljubljana, Slovenia.



#### Ann BOURGÈS

Conservation Scientist,  
Centre for Research and Restoration of Museums of France (C2RMF).

#### A Transversal Approach to Tackle Climate Change on Cultural Heritage.

Natural and cultural heritage are strongly impacted by climate change, but they can also provide solutions. They offer a whole range of resources for green development through the reuse of cultural heritage or the reactivation of ecologically virtuous traditional know-how. The French ICOMOS group proposes to develop a multiscale methodology from cultural and urban landscapes to the study of the carbon footprint in a renovation context. Thus, through three examples taken from the World Heritage List, this presentation will identify the main ongoing actions and common solutions and recommendations guiding future developments or interventions on our heritage.



#### Greta BRUSCHI

Architect and Research Fellow at Iuav University of Venice, Italy. .

#### Edoardo Gellner and the 'Invention' of the Landscape for the 'Ex Eni Village' A further Vulnerability in Case of Extreme Weather Event.

The case study of the 'Ex Eni Village' constructed by Edoardo Gellner in Borca di Cadore (North of Italy) in the 50s allows architectural and landscape-scale reflections on climate change and conservation issues. The anthropic redevelopment of the area (characterised by landslides and hydro-geological risk), implemented by Gellner, now faces new challenges arising from climate change. The increasingly frequent extreme weather events, such as the storm Vaia (2018), have highlighted further vulnerabilities of the site, and the variation of environmental parameters is now changing the conservation conditions of the materials.



#### Luiz Antônio CRUZ SOUZA

Professor in Conservation Science,  
Federal University of Minas Gerais (UFMG), Belo Horizonte, Brazil.

#### Heritage Science Networks: Contribution to the United Nations 2030 Agenda for Sustainable Development.

The preservation of natural and cultural heritage is a global challenge for science and human society in general. This presentation focuses on cooperation networking initiatives based on the relationship between culture, science, education, and sustainability. The UN-SDG and the Paris Agreement have generated a new perspective for several institutions. Museums and heritage sites provide an existing global infrastructure, which can facilitate collective action, build networks, raise public awareness, support research, and improve sustainability and climate change education. The main objectives of the national, regional, and international institutions are to produce an environment of cooperation within the transdisciplinary area of Heritage Science and exchange knowledge, data, and access to laboratory infrastructure, enabling scientific research and the conservation of cultural heritage.

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## Cultural heritage facing climate and environmental change

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### Aitziber EGUSQUIZA

Senior Researcher at Tecnalia, Spain.

#### **Towards Climate Neutral and Resilient Historic Urban Districts.**

In response to the global need to address resilience in historic areas to cope with climate change and natural disasters, a European R&I Task Force has been established by the projects ARCH, HYPERION, and SHELTER.i. It aims to stimulate the adoption of solutions for climate change adaptation and resilience enhancement in historic areas via dialogue and exchange of best practices increasing the awareness regarding the role of historic areas in stimulating the public to actively contribute to climate resilience in accordance with the preservation of heritage.



### Paloma GUZMAN

Doctoral Student,  
Department of Heritage and Society at the Norwegian Institute for Cultural Heritage Research (NIKU), Norway.

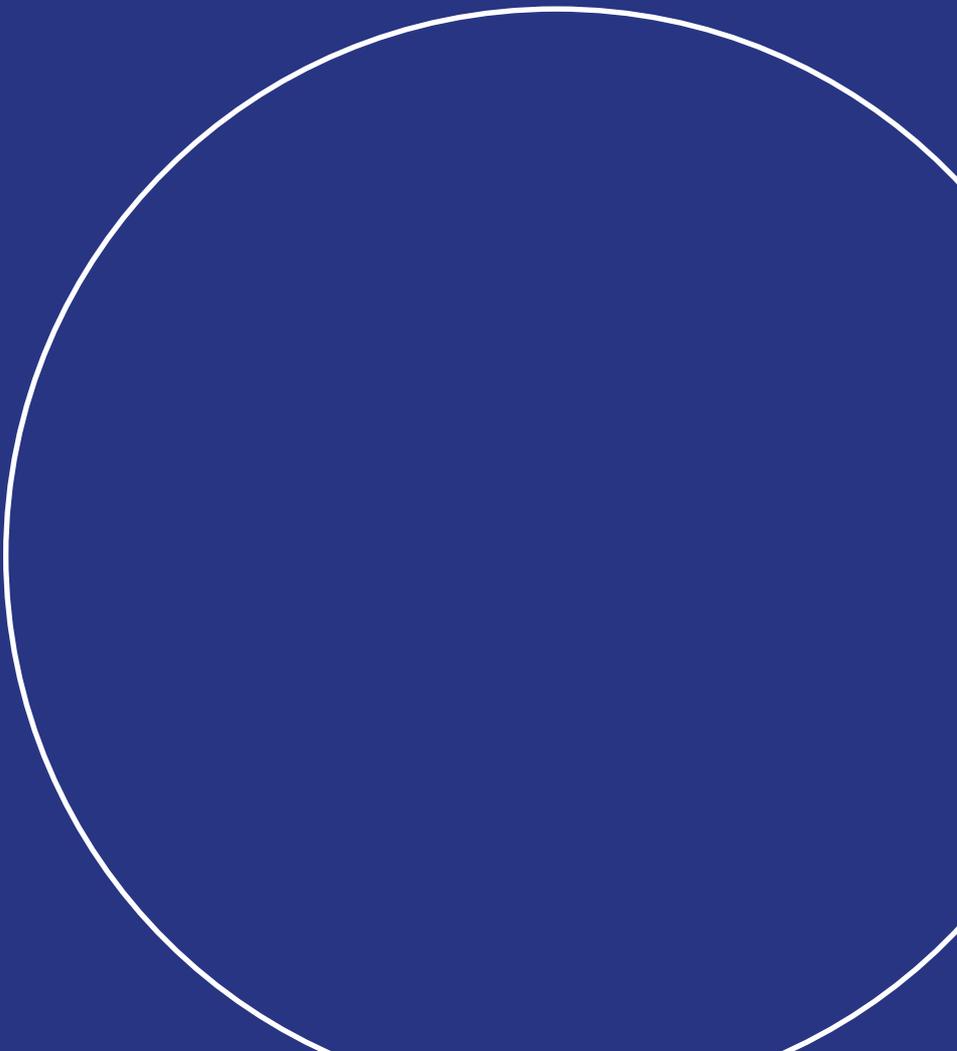
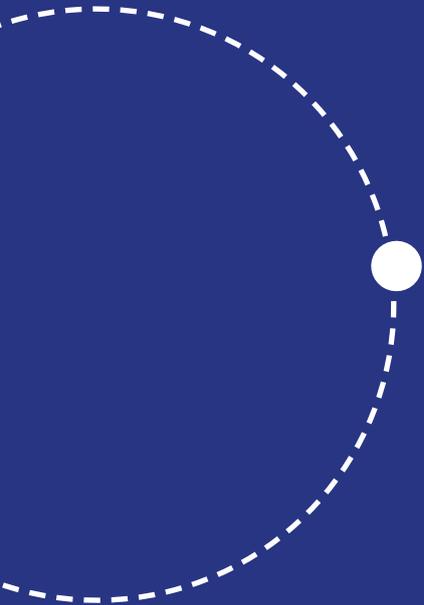
#### **Introduction of Heritage in Climate Planning (HiCLIP).**

The project Heritage in Climate Planning (HiCLIP) systematically assessed the treatment of cultural factors and the cultural sector's role in ten climate adaptation and mitigation plans. HiCLIP identified seventeen thematic activities that commonly included cultural resources across national, regional, and local plans and provided an entry point across government sectors. HiCLIP points out a dichotomy caused when for instance, nature and biodiversity-related sectors acknowledge the role of cultural resources for sustainable climate solutions. Yet the governmental cultural sector, and its role in supporting other sectors in mobilising cultural resources, tend to be lacking when operationalising specific climate actions and targets.



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## Cultural heritage in a changing context

RT 3.1 :

### From Decline to Revival: Cultural Heritage and Urban Regeneration.



MODERATOR

#### Albert NOUMOWÉ

University Professor,  
Director of the Institute of Science and Technology, CY Cergy Paris University, France.



#### Branislav ANTONIĆ

Teaching Assistant, Belgrade University, Faculty of Architecture, Serbia.

#### **A Micro Museum Quarter in Sombor, Serbia, as a Sustainable Model for Managing Cultural Heritage in Small Shrinking Cities in Europe.**

The creation of a museum quarter has been seen as a sustainable model to preserve and promote cultural heritage in many large European cities with development challenges. However, this model has been rarely applied in smaller cities. This paper presents an emerging micro-museum quarter in the historic core of Sombor, the best-preserved medium-sized city in Serbia. Due to urban shrinkage, local authorities and experts have chosen a spatially rationalised approach to preserve local heritage within this quarter in the western part of Sombor core. They are also preparing the next step – to add a creative component by involving local SMEs.



#### Alix DE LA GIGNONNIÈRE

PhD Researcher and Teacher, Ecole normale supérieure (ENS), France.

#### **Post-growth Heritage. Shrinking Towns as Laboratories for New Heritage Management.**

The decline of historic centres is a major phenomenon in France today. In recent years, revitalisation programmes (Action Cœur-de-Ville and Petites villes de demain) have put this phenomenon on the national agenda. This paper aims to outline the impacts of degrowth on the management of urban heritage in three small towns: Villefranche-de-Rouergue (Aveyron), Thiers (Puy-de-Dôme) and Urbin (Marche region, Italy). The survey method is mixed, based on semi-structured interviews and quantitative analyses. The objective is to reflect on the adaptation of tools and practices for the conservation of urban heritage in our post-growth societies.



#### Miguel RIVAS

Founding partner of the TASO Group, Spain

#### **Building up the Integrated Approach for Heritage-driven Urban Development and Regeneration.**

The way the heritage field has evolved over the past years [with new concepts like heritage valorisation and historic urban landscape] gives cultural heritage a great opportunity to work massively as a driver for sustainable urban development. To make this happen—that is, to make heritage-driven urban development & regeneration work—we need to build up and mainstream a dedicated integrated approach. Within the context of the URBACT Programme, a number of medium-sized cities across Europe are currently in this attempt by assembling five key dimensions—Space, Economy, Social Cohesion, Attractiveness and Governance. The question is, how can a broader conception of built heritage contribute significantly to each of these pillars?



#### Varvara TOURA

PhD Student in Geography and Planning,  
EHESS/Géographie-Cités, France.

#### **Challenges and Opportunities in the Preservation of Industrial Cultural Heritage after the Deindustrialisation Era. The Reintegration in the Urban Tissue of Two Former Industrial Sites in France: Ile-de-Nantes and Docks-de-Seine.**

The presentation questions the meaning of 'industrial cultural heritage' in former industrial cities, both in terms of preservation of industrial heritage and with regard to current urban planning policies for sustainable development. The research proposes a critical examination of two programs of industrial sites transformations, the projects Ile-de-Nantes and Docks-de-Seine. The performed analyses included a combination of statistics techniques and qualitative methods. The final conclusion is that the goal of urban growth in former industrial cities could be reached through the preservation of 'industrial cultural heritage' and the creative activities offered by local authorities and developers (research centres and museums).



## Cultural heritage in a changing context

RT 3.2 :

### When Culture Meets Nature: The Cultural Landscapes in Question.



MODERATOR

#### Eva SVENSSON

Archaeologist and Professor in Environmental Sciences at Risk and Environmental Studies, Karlstad University, Sweden.



#### João DUARTE

PhD Student and Contractual Teacher, Jean Monnet University, France.

#### The Paradox of the Aestheticization of the Alto Douro Wine Region Landscape: Vernacular Languages in Contemporary Architecture.

The Alto Douro Wine Region has been on the World Heritage List since 2001. This anthropic landscape results from agricultural practices and modern agricultural methods that are still in use and continue to develop and transform the territory. Simultaneously, the patrimonialisation of the landscape and the tourism industries promote a mythification of the rural areas as depositaries of pure values and landscape authenticity. This presentation proposes to analyse the relationship between the valorisation of the heritage landscape and the development of contemporary architecture projects. It will investigate the paradoxes in the aestheticisation processes of the landscape with a particular interest in vernacular architecture. How will vernacular architecture influence contemporary languages in architecture, particularly in wineries? Are we facing hybrid forms in architecture?



#### Méghane DUVEY

Scientific and Conservation Officer, Conservation départementale de Vaucluse, France.

#### Managing and Thinking the Future of a Tourist Attraction Whose Identities and Uses are Numerous: The Case of Fontaine-de-Vaucluse.

Located in the heart of the Monts de Vaucluse, the 'Fontaine de Vaucluse' (or spring of Vaucluse) is an exceptional and fascinating natural site endowed with a mysterious resurgence, an object of worship, poetry and enchantment since Antiquity. Listed in 1922, this rehabilitated haven of peace – a former industrial site – faces now a massive flow of tourists. Thus, the left bank of the Sorgue is concerned by the first actions of a cultural site management and conservation plan within the Opération Grand Site de France to combine mass tourism, sports practices, landscape and biodiversity conservation and cultural valorisation.



#### Bérénice GAUSSUIN

Heritage Architect, Associate Professor (ENSA Paris-Malaquais), Researcher at the Infrastructure Architecture Territory Laboratory (LIAT), France.

#### The Non-human Inhabitants of Historical Monuments. The Case-Study of La Chapelle-Gauthier Castle (Seine-et-Marne, France).

La Chapelle-Gauthier castle is a historical monument in Seine-et-Marne, far from touristic routes and neglected through history. It can be considered a burden for its owner: maintaining such a castle is expensive for a small town like La Chapelle-Gauthier. The consequence of this situation is the partially abandoned state of the building, which may seem catastrophic considering the traditional heritage values. Still, it can also be an opportunity for animals to settle in, adding another value – biodiversity – to the historical monument.



#### Menne KOSIAN

Spatial Analysis Researcher, Cultural Heritage Agency of the Netherlands.

#### Future Wetlands. A New Integrated Framework for Sustainable Heritage Management in Dynamic Landscapes.

Wetland environments are amongst the most dynamic and vulnerable landscapes. Because of their distinct characteristics, they are sensitive to climate, demographic, economic and political changes. This presentation will introduce a new digital methodology for integrated heritage management for three Dutch wetland areas: the western fenlands-area, the world heritage sites of Schokland and the Wadden Sea. It will show how to incorporate historical and modern data to make informed management choices, discuss how historical adaptations provide unique insights for sustainable management and demonstrate that differentiation between 'nature' and 'culture' might hamper long-term management of dynamic landscapes.



## Cultural heritage facing climate and environmental change

RT 3.3 :

### Challenges and Perspectives for the Sustainable Rehabilitation and Renovation of Built Heritage.

MODERATOR

#### Koenraad VAN BALEN



Professor at KU Leuven, Department of Civil Engineering,  
Director of the International Centre for Conservation Raymond Lemaire.  
Holder of the UNESCO Chair on preventive conservation, monitoring and maintenance of monuments and sites,  
Co-initiator of HERKUL - Institute for Cultural Heritage of the KU Leuven, Belgium.



#### Dorian BIANCO

PhD Student at the André Chastel Centre,  
Sorbonne University, France.

#### 20th-Century Architectural Heritage and Thermal Rehabilitation of Buildings: Irreconcilable Issue or New Frontier?

Heritage protection has recently been extended to the later periods of 20th-century architectural history. Still, the large-scale demographic growth of the postwar period triggered an unprecedented wave of building programmes that were severely criticised for their lack of thermal comfort. Today, many ecological transition programmes are based on energy savings and efficiency and call for wall insulation and the substitution of finishing elements, challenging the architectural integrity of postwar buildings. The artistic value of postwar architecture remains hardly recognised, and its preservation highly depends on the future of both heritage rules and energy policies. Which model of energetic transition should we adopt to preserve it?



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Jean-Marin architectes

#### Julien CORREIA

Architect and Researcher at de Jean-Marin Architectes, Paris, France,  
Associate Researcher IPRAUS / UMR AUSser (CNRS).  
MCFA ENSA de Bretagne (TPCAU), France.

#### Ordinary Buildings, A Majority Heritage to Be Rehabilitated: A Cultural and Creative Positioning beyond Energy Sobriety.

This presentation considers existing housing buildings as the main heritage to be rehabilitated by combining architectural enhancement and thermal performance. It will first define the ordinary heritage in terms of its components and its contemporary housing potential. It will discuss the transition from diagnosis to design in its capacity to rely on the qualities of the existing building to go beyond the quantitative objectives of energy sobriety. Lastly, this presentation will highlight the experience of the building site in an inhabited environment, its lessons in terms of consultation and the involvement of the occupants.

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## Cultural heritage facing climate and environmental change

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### Joana DOS SANTOS GONÇALVES

Architect and Lecturer in Heritage and Sustainability,  
Faculty of Architecture and the Built Environment,  
Technical University of Delft, The Netherlands.

#### Exploring Design Students' Perceptions of Sustainable Heritage by Using Generative Techniques.

The concepts of heritage conservation and sustainable development have become more inclusive over time. They share a common goal: to conserve valuable ecosystems for future generations. However, they are sometimes still perceived as incompatible concepts. Attitudes – both cognitive and affective – have an important correlation with the actual conservation behaviours. This presentation will introduce a study investigating how tacit knowledge mediates perceptions of 'sustainable heritage' and shapes attitudes towards conservation decisions. Through the creation of collages, participants expressed their priorities, emotions, and subjective attitudes towards heritage and sustainability. The results identify key themes and support future frameworks towards a common language to consider sustainability in heritage conservation decisions.



### Nathalie VERNIMME

Research Programme Advisor at Flanders Heritage Agency, Belgium.

#### Every Little Helps! Research-Based Policy Measures to Reduce CO2 Emissions of Protected Houses in Flanders.

The presentation highlights the efforts of Flanders Heritage Agency (FHA) - the regional authority in Flanders in charge of immovable heritage- to facilitate the retrofit of protected buildings without damaging the heritage values. A series of 'assessment frameworks' were developed to guide owners in selecting appropriate retrofit measures. In addition, a specific 'energy audit for protected buildings' was installed based on the European Standard EN 16883, as well as a specialised training course and a question portal for conservation architects who want to improve the sustainability and energy performance of heritage buildings.



## Sustainable management of cultural heritage

RT 3.4 :

### Tangible Heritage and Green Conservation: Practices in Question.



MODERATOR

#### Charles PERSONNAZ

Director of the Institut national du patrimoine (INP), France.



#### Myriame ALI-AOUALLA

Post-Doctoral Researcher, Bordeaux University (I2M) - ENSAPBX (PAVE), France.  
Architect D.E.

#### Adapting 20th Century Architecture to New Climatic Challenges: Methodological Approaches for a More Reasoned Intervention.

Since the end of the 1990s, 20th-century architecture has made remarkable efforts to conserve and adapt to current societal and climatic imperatives. Although technological advances offer devices that meet the needs of energy upgrading, their implementation does not necessarily guarantee the respect of protection objectives. Within the framework of a transdisciplinary research project in New Aquitaine, research teams and innovation players are combining their expertise to consider the acceptability and feasibility of energy renovation of a group of remarkable buildings, taking as an example the use of «ventilated double-skin», with the aim of developing a reasoned intervention methodology.



#### Aline MAGNIEN

General Heritage Curator,  
Laboratoire de recherche des monuments historiques (LRMH), France. .

#### The Restoration and Preservation of Historic Materials: A Means to Ensure the Economic and Ecological Management of Cultural Heritage.

The restoration of historic monuments is, in itself, an ecological act, part of an economy concerned with sustainability, permanence and reuse. Various processes are nevertheless being tested and implemented to reduce the impact of conservation actions: reduction or even elimination of chemical products, development of non-invasive techniques, research projects to develop more minimalist, less intrusive interventions. Yet, we can go further by rethinking the relationship between eminently cultural elements and nature and by interrogating, as we do in the vegetation of buildings or soft-caping, about another relationship between historic monuments and nature, plant life and historic stone.



#### Beatriz MENÉNDEZ-VILLAR

Lecturer at the Geosciences and Environment Department of CY Cergy Paris University, France.

#### Sustainable Conservation and Restoration of Built Cultural Heritage: The SCORE Project.

The SCORE project aims to bring together an intersectoral, international and multidisciplinary group that includes a wide range of actors – materials scientists, biologists and civil engineering researchers, archaeologists, art historians, Life Cycle Assessment specialists, climatologists, consulting companies, training organisations and non-governmental organisations – in order to strengthen collaborative research and innovation in eco-friendly conservation, restoration, and rehabilitation. Matching cultural heritage requirements with ecological, economic and social aspects becomes essential and require highly qualified labour for conception, execution and conservation works. More work must be done to consider the ecological footprint of the materials and methods employed on built cultural heritage conservation.



#### Mathilde MONACHON

Post-Doctoral Researcher at Neuchâtel University, Switzerland.

#### Biopreservation of Waterlogged Archaeological Wood.

This presentation will introduce the Get On Board project, which aims to develop a bio extraction method for the harmful iron and sulfur species from waterlogged archaeological wood that is more respectful towards the environment, the user's health, and the treated objects. The efficiency of the bio extraction and its versatility on different wood species coming from different waterlogged environments are evaluated with common non-destructive and non-invasive methods. Wood conservators involved in the project also participate in the assessment of the method to validate this innovative biotechnology.



## A reflective heritage for a resilient society

RT 4.1 :

### Towards Inclusive and Socially Engaged Heritage Practices.



MODERATOR

#### Harald HARTUNG

Head of Unit at the European Commission,  
Directorate General for Research and Innovation, Unit 'Fair Societies and Cultural Heritage'.



#### Sophie CROISY

Lecturer in North American studies,  
University of Versailles Saint-Quentin-en-Yvelines (UVSQ)/ Paris-Saclay University, France.

#### Where do Minority Cultural Rights Stand in the Complex, Contemporary International Alliance between Cultural Heritage and Human Rights?

This presentation will assess the place of minority cultural and heritage rights as human rights in the realm of international relations. How have minority cultural groups actively participated in promoting culture and heritage preservation as a human right issue in recent years? It will also discuss the resistance of the international community (the HRC and the ECtHR, for example) to the protection of minority cultural and heritage rights, despite the growing incorporation of cultural diversity and heritage preservation issues in human rights rhetoric and actions at the international level.



#### Lorna CRUICKSHANKS

Co-founding Editor of Culture Caleidoscoop, Pays-Bas.

#### Culture Caleidoscoop: New Publication for Reflective Heritage Practices.

Culture Caleidoscoop is a new online, international, interdisciplinary, peer-reviewed platform for sharing research on socially engaged practices across the arts, cultural, and heritage sectors. This presentation will share how the publication aims to promote reflective practice and horizontal knowledge sharing in the sector. Culture Caleidoscoop seeks to address some of the inequalities in whose experiences and what knowledge is published, as well as who has access to these publications. Solving some of the challenges and creating a fairer space for publishing requires a reimagined way of working – one that is itself more inclusive, participatory, and (self-)reflective.



#### Alessio DEL BUE

Research Director for PAVIS (Pattern Analysis and computer VISion),  
Italian Institute of Technology (IIT).

#### MEMories and EXperiences for Inclusive Digital Storytelling (MEMEX).

This presentation will introduce MEMEX, a European 3-year RIA project funded under the Horizon 2020 programme. MEMEX promotes social cohesion through collaborative, heritage-ICT related tools that provide access to tangible and intangible CH and facilitate encounters, discussions, and interactions between communities at risk of socio-cultural exclusion. The MEMEX approach combines both social and technological innovation. It is also a strong example of how cultural heritage and its re-interpretation and reuse through digital storytelling is a key medium in shaping a more inclusive society.



#### Nathalie NOEL

Lecturer in Information and Communication Sciences,  
University of Reunion Island, France.

#### PATRIMINDIAOCEA Immersive Digital Platform: Integrating the India-Oceanic Cultural Heritage in the Process of Resilience of European Territories.

The project Patrimindiaoccea consists of registering the cultural heritage of India-Oceania territories in a digital and innovative database (the first of its kind) with the aim of increasing the visibility and the recognition of India-Oceania's place in the cultural construction of Europe. Through an immersive digital application, to be conceived with the field actors, the project seeks to offer new perspectives on the post-colonial societies of India-Oceania, whose process of 'creolisation' stands out as examples of a 'resilient' society that should participate in current European debate about 'intercultural dialogue', 'living together' or, even, the construction of a 'human community'.



## Sustainable management of cultural heritage

RT 4.2 :

### Digital Heritage: Frameworks and Practices for a Sustainable Management.



MODERATOR

#### Florent LAROCHE

Doctor-Engineer, Lecturer at Ecole Centrale de Nantes, France.  
Researcher at the Research Institute for Communication and Cybernetics of Nantes (IRCCyN).



#### Vincent DETALLE

Conservation Research Engineer at the Ministry of Culture.  
In charge of the laser activities at the Centre for Research and Restoration of Museums of France (C2RMF).  
Scientific and Technical Coordinator of the ESPADON project.

#### ESPADON: The Dynamic Analysis of Ancient and Digital Objects in Heritage Science.

ESPADON faces the challenges of creating a truly multidimensional and scalable information system (a new media), aggregating the sociology of boundary objects research results and the input of the multiscale socio-technical networks and infrastructures for new processing of heritage objects. The creation will require a joint and integrative reflection of the contribution of digitisation, data and para-data to the augmented heritage object, ensuring its enhancement, conservation, transmission and contributing to its restoration through the integration of three networks: social science and humanities, including museum institutions, experimental science and digital science. Espadon will contribute to the creation of a heritage science component of the European Open Science Cloud.



#### Sorin HERMON

Associate Professor at the Cyprus Institute.

#### The Heritage Digital Twin – A New Ontological Approach for Cultural Heritage Knowledge Organisation.

Open Science requires a deeper understanding of cultural heritage digitisation, access and management of such resources, and data reuse. It also necessitates a clear and transparent process on how digital data is created, a comprehensive and holistic approach to the description of heritage assets, with their tangible and intangible aspects, and clear policies regulating access, management and IPR of the digital components. This presentation will introduce the Heritage Digital Twin - the holistic complex of knowledge about a heritage asset and its dedicated ontology. It incorporates information about conservation, preservation, safeguarding and valorisation of the asset, as well as documentation.



#### Adeline MANUEL

Research Engineer in 3D Reconstruction,  
Models and Simulations for Architecture and Heritage laboratory (MAP).  
National Centre for Scientific Research (CNRS), France..

#### A Reality-Based 3D Annotation Cloud Platform for the Collaborative Documentation of Cultural Heritage Artefacts.

Despite their different approaches and tools for observation, description and analysis, the actors of cultural heritage documentation all have a common interest and central focus: the heritage object, the physical one, whether it is a site, a building, a sculpture, a painting, a work of art, or an archaeological fragment. This is the starting point for the development of «aioli», a reality-based 3D annotation platform, which allows a multidisciplinary community to build semantically-enriched 3D descriptions of heritage artefacts from simple images and spatialised annotations coupled with additional resources.





## Sustainable management of cultural heritage

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.../...



### Marco POTENZIANI

Researcher at the Visual Computing Laboratory, National Research Council (CNR), Italy.

#### **Cultural Heritage 3D Data on the Web: Issues and Perspectives.**

3D digital models are unanimously considered an invaluable asset in the study, management and promotion of cultural heritage. COVID-19 emergency has accelerated the common trend of working remotely, and, for cultural heritage, presenting, sharing, and accessing 3D data online is now perceived as a necessity. Unfortunately, the lack of standard methodologies, tools, and infrastructures, makes it difficult to jump from local storage to web management of complex 3D data. This presentation will assess the state of the art of advanced use of 3D on the web, presenting some case studies, highlighting the current needs, and exploring the future trends.



### Susanne TIENKEN

Associate Professor and Senior Lecturer in German Linguistics,  
Stockholm University, Sweden.

#### **Workflow for Real-Time Access to Digitalized Culture Heritage Collection Data for Visualization Infrastructures.**

This presentation will introduce a workflow for culture heritage collection data in which distributed meta-learning with context-based fusion is required. The multidisciplinary approach outlines a new paradigm for the collaborative creation of a context-based data fusion workflow. The requirement criterion for the search space within the cultural heritage sector is to include multiple objects and make possible analyses of the visualisations of objects' metadata. This approach promotes user-driven content creation. In response to these challenges, the presentation proposes a framework for massive and real-time presence and awareness on the Internet through an Internet-of-Things infrastructure to connect objects, context and intangible assets.



## Cultural heritage facing climate and environmental change

RT 4.3 :

### Learning from the Past: Mobilising Cultural Heritage for a Sustainable Future.



MODERATOR

#### Costanza MILIANI

Director of the Institute of Heritage Science,  
National Research Council (ISPC -CNR), Italy.



#### Emma CANTISANI

Permanent Researcher at the Institute of Heritage Science,  
National Research Council (ISPC-CNR), Italy.

#### Learning from the Past to Plan the Future for Material Science.

The presentation will discuss a multidisciplinary approach obtained by combining material science methodologies and archaeological and architectural research to study ancient mortars. Ancient mortars are 'complex' materials in terms of composition and microstructure, obtained from locally available raw materials, mixed and applied following traditional techniques, often characteristic and peculiar of countries and cultures. In addition to their cultural significance, some of these materials, which exhibit exceptional durability and resilience to climatic changes and catastrophic events, could inspire the design of a new generation of durable and sustainable mortars. A multi-analytical study of these composite materials will be at the core of the presentation.



#### Marie-Béatrice FOREL

Associate Professor at the National Museum of Natural History, Paris, France.

#### Past Expeditions, Future Expeditions: Foraminifera from the Charcot Collection Re-examined in the Light of Climate Change.

Scientists are constantly looking for new comparison materials to characterise the current climate and environmental changes. They are increasingly interested in the sediments brought back by former exploration expeditions as points of comparison to study the evolution of marine environments. The National Museum of Natural History's micropaleontology collections store unique sands and foraminifera samples collected by Jean-Baptiste Charcot on board the Pourquoi-Pas? in the 1920s. Comparing the micro-organisms they contain with sands collected today is highly valuable to understand what they can teach us about the resilience of marine ecosystems under the increasing influence of human activities.



#### Pierre GRAS

President of the Association Moulin de l'Arsenal de Rochefort (AMAR), France.

#### The Rochefort Arsenal Windmill: Rethinking the Links between Ecology and Cultural Heritage.

Rochefort has the best-preserved arsenal in Europe along the Charente. Its characteristic is a great capacity for innovation in the face of a hostile environment. In 1806, the engineer Jean Baptiste Hubert had the idea of preventing the deposit of silt in front of the dry dock with a scraper boat powered by a windmill. This original solution has a strong meaning in the fight against silt. The Association du Moulin de l'Arsenal de Rochefort, created on 22 September 2016, wishes to reproduce this idea. This ecological, economic, heritage and tourist project constitutes an experiment in the valorisation of history, inscribed in the environmental emergency.



#### Maria-Paloma VILA-VILARIÑO

Independent Architect, Spain.

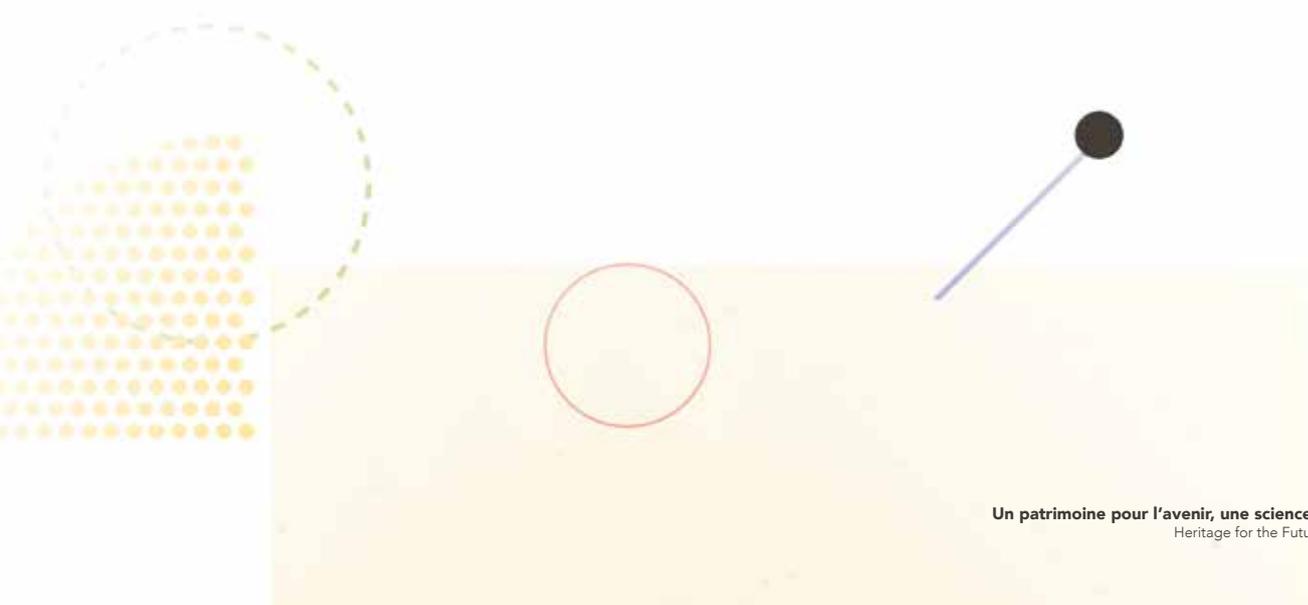
#### Heritage Compatibility Assessment for the Energetic Reuse of Watermills.

The energetic reuse of historical water mills is currently being proposed in Europe. Therefore, the question arises as to how and what type of hydraulic heritage asset would be favoured by implementing such an initiative. A method to evaluate heritage compatibility has been developed and applied in Spain: the results identify the incompatible assets and show that 39% are compatible. This assessment method considers the cultural significance and proves to be useful in selecting the most compatible assets by verifying their compatible use and opening up new perspectives in planning for places of cultural significance.

## **WELCOME SPEECH**

### **Laurence ENGEL**

President of the Bibliothèque nationale de France (BnF).





## Sarah HUGOUNENQ

Independent Journalist specialising in arts sponsorship, cultural funding and heritage policies.  
Teacher at the Ecole du Louvre and PhD Student in Social Sciences.

SYMPOSIUM FACILITATOR AND PLENARY SESSIONS MODERATOR

Plenary session 3:

## Training Heritage Stakeholders: Challenges and Prospects.

In a 21st century already marked by profound societal, economic and environmental changes, heritage professionals, whether in charge of museums, historical or archaeological sites, archives, libraries, associations or non-governmental organisations, must constantly reinvent their practices if they want to continue playing their role of facilitators efficiently. The question of their training, initial or continuing, is more crucial than ever. Many European countries have developed innovative offers that give the possibility of acquiring increasingly wide-ranging skills to design and implement modes of action adapted to contemporary issues. The close dialogue at local, national and European levels with researchers from multiple disciplinary backgrounds and the essential continuum between fundamental research and field applications are more necessary than ever for sustainable cultural heritage management.



## Bruno FORMENT

Principal Investigator at the Orpheus Institute, Belgium.



## Maria GRAVARI-BARBAS

Professor at Paris 1 Panthéon-Sorbonne University, France.  
Chair of the UNESCO Chair 'Culture, Tourism and Development';  
Chair of the Self-Steering Committee for Cultural Heritage of Una Europa University Alliance.



## Harald HARTUNG

Head of Unit at the European Commission,  
Directorate General for Research and Innovation, Unit 'Fair Societies and Cultural Heritage'.



## Alison HERITAGE

Project Manager, Strategic Planning & Research,  
International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM).

Plenary session 4:

## **Cultural and Creatives Industries, A New Field of Application for Heritage Science.**

The cultural and creative industries and their recent developments linked to digital technology question the ability of cultural heritage to renew the dialogue it has always maintained with creation. The immense wealth and the great diversity of works, objects, practices and know-how are potentially inexhaustible sources of inspiration for today's artists and creators. In turn, the way creative cultural industries look at this heritage can be a powerful revealer and transform the way we do and make cultural heritage more accessible and alive in contemporary society. Research in heritage science can make a decisive contribution on all these points, provided that the conditions for real cross-pollination between researchers and creators, science, and industry, public and private, are created.



### **Elisabetta AIRAGHI**

Senior Consultant and Project Manager at KEA European Affairs, Belgium.



### **Bernd FESEL**

Director of the European Creative Business Network (ECBN).



### **Barbara GESSLER**

Head of Unit Creative Europe at the European Commission  
Directorate General for Education, Youth, Sport and Culture.



### **Maria KAYAMANIDOU**

Deputy Head of Unit at the European Commission,  
Directorate General for Research and Innovation,  
Unit 'Fair Societies and Cultural Heritage'

Plenary session 5:

## The Contribution of Heritage Science to the New European Bauhaus.

The New European Bauhaus, an initiative launched by the European Commission in 2020, aims to create a new art of living accessible to the greatest number, reconciling creativity and sustainability. As its predecessor did, its ambition is to stimulate all the creative sectors that contribute to embellishing our daily environment, from urban planning to design, including fashion and architecture. At the crossroads of art, cultural heritage and science, the New European Bauhaus is a creative movement at the heart of the European Green Deal. Its truly interdisciplinary ambition is in many ways similar to that of heritage science, which can, through its dynamism, make a decisive contribution to its development.



### Mariachiara ESPOSITO

Policy Officer in charge of Cultural Heritage, Research and Sustainable development, Seconded National Expert at Cultural Policy Unit, European Commission.



### Ruth SCHAGEMANN

President of the Architects' Council of Europe (ACE).



### Annick SCHRAMME

Full Professor and Academic Director of the Knowledge Community Creative Industries Antwerp Management School, Belgium.



### Isabelle VÉRILHAC

Head of International Affairs and Innovation, Cité du design, Saint-Etienne, France, President of the Bureau of European Design Associations (BEDA), Focal point for Saint-Etienne UNESCO City of Design.

**Pascal LIÉVAUX**

Senior Officer, Department for Research, Valorisation and Intangible Cultural Heritage  
Delegation for Inspection, Research and Innovation,  
Directorate-General for Heritage and Architecture, Ministry of Culture,  
Chair of the European Joint Programming Initiative JPI Cultural Heritage.

MODERATOR

## Heritage Science, What Perspectives in France and in Europe?

### Summary of the Key Messages and Closing

**Ghislaine GLASSON-DESCHAUMES**

Research Engineer and Head of Project of the Cluster of excellence Pasts in the Present,  
University Paris Nanterre, France.

**Odile HEYNDERS**

Professor of Comparative Literature, Tilburg University, The Netherlands.

**François PERNOT**

Professor of Modern History,  
Director of the University Research School (EUR) Humanities, Creation, Heritage,  
CY Cergy Paris University, France.

**Vania VIRGILI**

Director of Technological Research, Institute of Heritage Science,  
National Research Council (ISPC-CNR), Italy.

## Heritage Science, What Perspectives in France and in Europe?

### **François GERMINET**

President of CY Cergy Paris University, France.

### **Vlastislav OURODA**

Deputy Minister for Cultural Heritage Section  
Ministry of Culture of the Czech Republic.

### **Isabelle PALLOT-FROSSARD**

President of the Foundation for Heritage Science, France.

### **Jean-Eric PAQUET**

Director-General for Research and Innovation, European Commission.

### **Antoine PETIT**

President of the National Centre for Scientific Research (CNRS), France.

### **Sylvie RETAILLEAU**

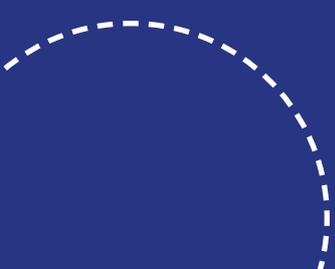
President of Paris-Saclay University, France.

**To prepare the symposium programme,  
a call for papers was launched from June to October 2021  
and addressed to researchers,  
doctoral students and various actors who contribute to the production,  
valorisation, dissemination, and applications of heritage knowledge.**

**Submissions were peer-reviewed by an International Scientific Committee,  
which led to the constitution of the round tables as well as the preparation  
and publications of short articles on the symposium website.**



**PARTNER  
EVENTS**



## WORKSHOP

 TEACHING IN A CHANGING WORLD :  
 CRAFTS AND THE REVALORISATION OF MANUAL  
 SKILLS AT THE HEART OF TOMORROW'S CHALLENGES

Versailles Campus Heritage and Craftsmanship of Excellence  
 18<sup>TH</sup> MARCH 2022 FROM 9 A.M. TO 12 P.M.

Auditorium of the Palace of Versailles

**TEACHING IN A CHANGING WORLD**  
**Crafts and the revalorisation of manual skills**  
**at the heart of tomorrow's challenges**

What is the impact of technological, socio-economic and ecological transitions - accelerated over the last two years by the Covid 19 health crisis - on the value-bearing sectors which are arts and crafts, living heritage and tourism ?

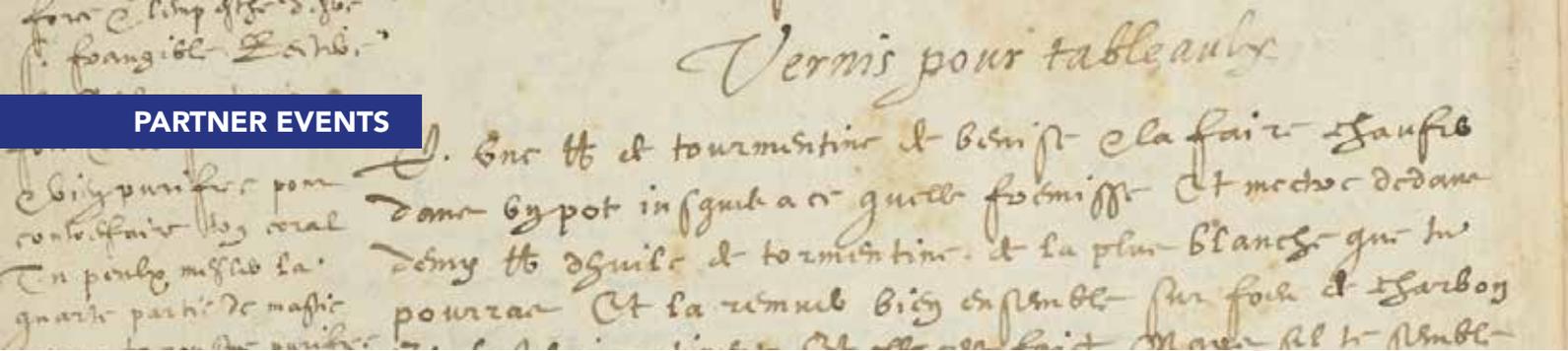
How should training courses evolve in the short and medium term to take this into account ? What models exist in the different European countries ? How can knowledge and know-how be passed on to contribute to the revitalisation of territories and the conquest of international markets ? This event will highlight the links between arts and crafts, living heritage and tourism in a perspective of more sustainable, local and solidarity-based consumption.

Researchers, teachers, students, entrepreneurs, representatives of associations, trade unions and professional federations concerned with the new challenges of responsible management and production and social equity in a sustainable development perspective will be brought together at European level to discuss these issues. This event will be organised in the form of two round tables allowing for crossing paths.

**Contacts:** [armelle.weisman@campusversailles.fr](mailto:armelle.weisman@campusversailles.fr) & [raphaele.bortolin@campusversailles.fr](mailto:raphaele.bortolin@campusversailles.fr)

**For more information:** [Click here.](#)

*This event will be held in French.*



## MARCH 17-18, 2022

### Heritage, research and training

What methods, what expertise, what specific skills are involved in the creation, safeguarding and conservation of heritage - understood as an autonomous object of public policy? What history sheds light on the evolution of these training courses, in relation to that of heritage institutions and universities in France, but also in comparison with other solutions tried and tested by our European neighbours? What is the weight of professional and societal changes in the definition or redefinition of the training offer? What opportunities does the dialogue between research and pedagogy, which is intrinsic to these courses, offer? To what extent does the interdisciplinarity constitutive of any scientific approach in this field of research open the way to the definition or redefinition of an original and singular episteme? How does the development of new degree courses allow for the realization of innovative projects in the service of heritage? What new perspectives, finally, does the extension of training to the European space bring: mobility, transnational graduation, etc.?

To answer all these questions, the **École nationale des chartes-PSL**, with the support of the **Fondation des Sciences du Patrimoine**, and in the continuity of the Conference «A heritage for the future, a science for heritage», invites French and European actors from higher education and research establishments and heritage and cultural institutions to exchange and debate on 17 and 18 March 2022.

After an inaugural lecture by Olivier Poncet, professor at the École nationale des chartes, a first session of interventions will approach the history of the constantly changing relationships between institutions, objects and disciplines.

The afternoon of 17 March will be dedicated to the institutional and professional changes that training courses must take into account today, and will give the floor to training managers as well as professionals from heritage institutions, around two round tables, devoted to the fields and professionalizing pedagogies, on the one hand, and to the question of heritage in the digital age, on the other.

On the morning of 18 March, a session will be held focusing on the relationship between research and training in the field of heritage. It will shed light, in the form of round tables, on the issues and epistemological positions involved in the development of training in this field at the graduate level, and will then give the floor to doctoral students or young PhDs.

Finally, the last session, on the afternoon of 18 March, will bring together, before the closing conference, several actors - teachers, students, heads of training programmes - from France and Europe who are involved in the creation of European courses and who are likely to shed light on the contribution of the internationalisation of training to the construction of a Europe of Heritage.

**Contact:** [communication@chartes.psl.eu](mailto:communication@chartes.psl.eu)

**For more information:** <https://www.chartes.psl.eu/fr/actualite/patrimoine-recherche-formations>

*This event will be held in French.*



Workshop  
 MARCH 17-18, 2022

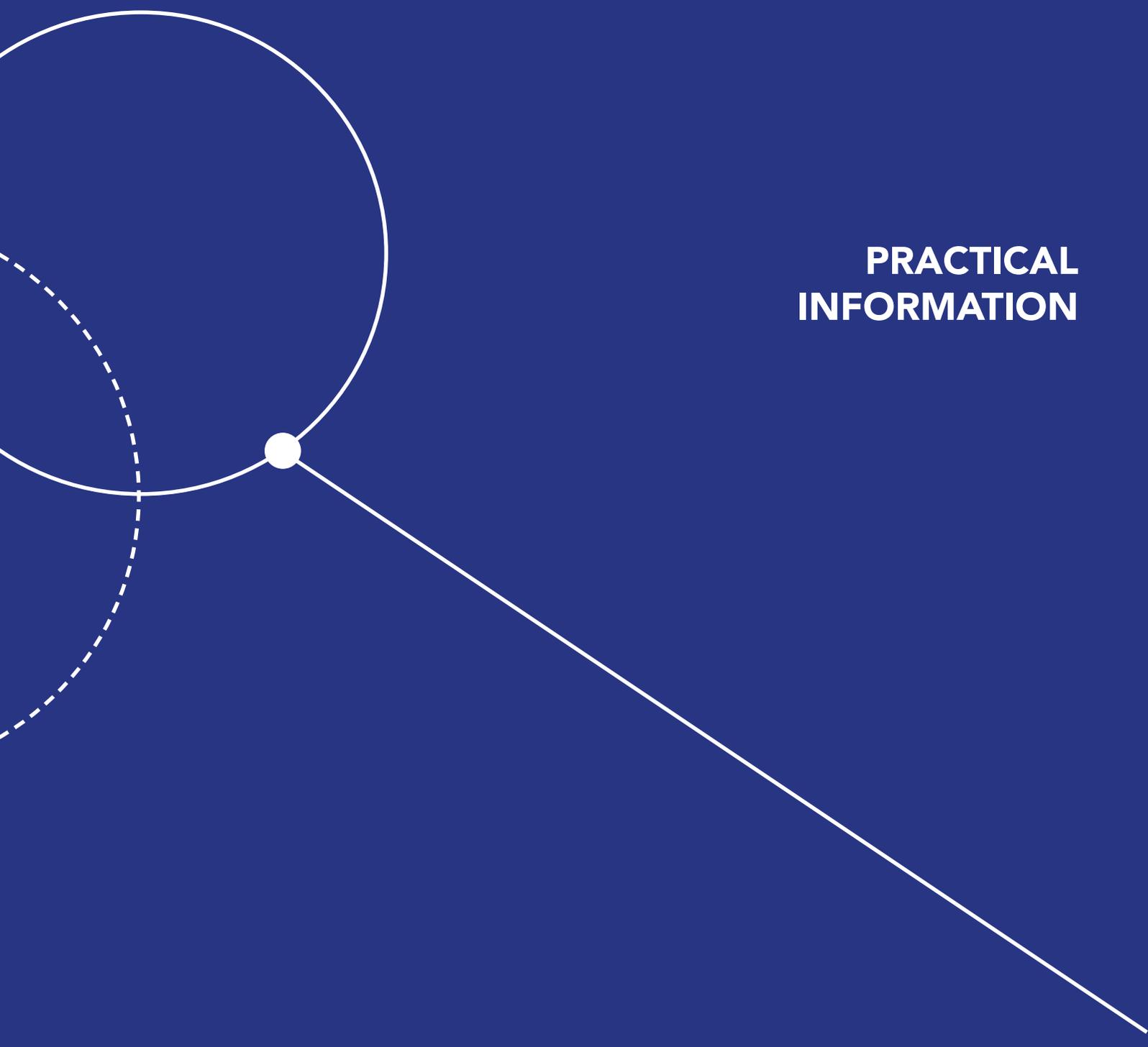
**CULTURAL HERITAGE AT THE EDGE (CUTE).**  
**Stakes and opportunities of cultural heritage revitalization**  
**in European urban fringes**

Urban fringes in European metropolises incorporate industrial areas, factory buildings, storage areas and warehouses, transport infrastructure, tenements, social housing, modern residential architecture. They offer aggregations of heterogeneous urban forms and styles. They have been the settling ground of newcomer populations arriving from former colonies, from the countryside or from recent immigration, and possess intangible heritages that reflect the social and cultural mix of their inhabitants, built around toponymy, ceremonies or arts and crafts.

Usually considered as the 'city's backyards' urban fringes are crucial for contemporary metropolization and are attracting a new interest from national, regional and local governments, private investors and local communities. They are the theatre of diverse social processes and reconfigurations. These processes involve formal, functional and symbolic changes that include the formulation of new uses of public space, the creation of new landmarks, references or heritage symbols; and they offer the potential for renewed and more inclusive understanding of (often contested and dissonant) cultural heritage, transforming the current metropolitan uneven geographies.

The workshop CULTURAL HERITAGE AT THE EDGE (CUTE). Stakes and opportunities of cultural heritage revitalization in European urban fringes presents the results of a research carried in the framework of 8 Una Europa Universities (<https://www.una-europa.eu/>) in 8 European cities and metropolises (Berlin, Bologna, Edinburgh, Helsinki, Krakow, Leuven, Madrid, Paris). It builds on cross- and interdisciplinary methodologies. It aims at presenting a systematic overview of the challenges of tackling the cultural heritage of urban fringes ; a critical analysis of the approaches of local stakeholders; as well as an agenda for future actions.

**Contact:** maria.gravari-barbas@univ-paris1.fr  
**For more information:** <https://cute.sciencesconf.org/>

An abstract graphic on the left side of the page. It features two overlapping circles: one with a solid white outline and one with a dashed white outline. A solid white line extends from the point where the two circles intersect, extending diagonally towards the bottom right corner of the page. A small solid white circle is positioned at the intersection point of the two circles.

## **PRACTICAL INFORMATION**

## TUESDAY 15 MARCH 2022

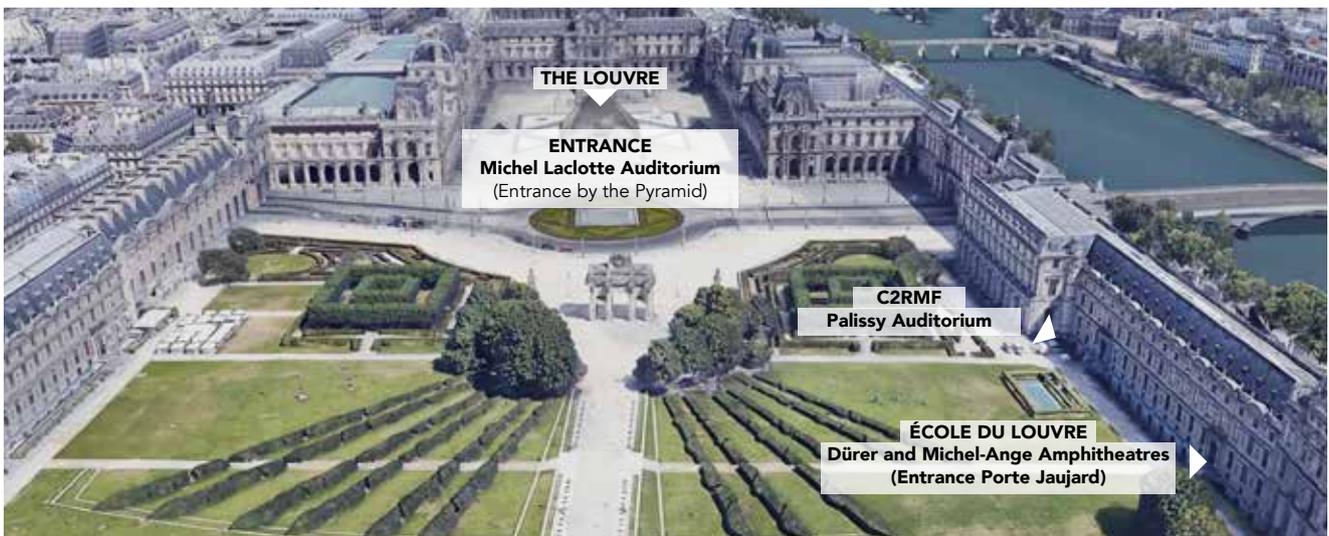
### The Musée du Louvre - Michel Laclotte Auditorium

Access to the Michel Laclotte Auditorium will be through the entrance of the Pyramid

Please note that on the first day, some round tables will not be held at the Musée du Louvre but in other places located nearby:

- Ecole du Louvre - Michel-Ange Amphitheatre, Dürer Amphitheatre
- Centre for Research and Restoration of Museums of France (C2RMF) - Palissy Auditorium

Please refer to the programme



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#### PUBLIC TRANSPORT

**Metro lines 1 & 7:** Palais-Royal - Musée du Louvre station

**Metro line 14:** Pyramides station

**Bus lines:** 21, 24, 27, 39, 48, 68, 69, 72, 81, 95

Contact:

[event@sciences-patrimoine.org](mailto:event@sciences-patrimoine.org)

Press contact and accreditation requests:

**Audrey Donnerfeld - 06 30 10 76 90 -**

[presse@sciences-patrimoine.org](mailto:presse@sciences-patrimoine.org)



• **VACCINATION PASS:**

In accordance with government regulations, access to the host sites requires the presentation of a vaccination pass for all persons over 16 years old.



• **VIGIPRATE:**

According to the Vigipirate preventative measures, suitcases are not allowed in the Louvre, the Ecole du Louvre and the C2RMF.

WEDNESDAY 16 MARCH 2022

**Bibliothèque nationale de France (BnF) - National Library of France**  
(Grand Auditorium, Salle 70, Belvédère)

**Bibliothèque François-Mitterrand**  
**Quai François Mauriac**  
**75706 Paris**

**Access to the BnF via  
the EAST entrance  
(Entrance Hall)**



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**PUBLIC TRANSPORT**

**Metro line 6:** Quai de la gare station  
**Metro line 14:** Bibliothèque François-Mitterrand station

**RER C:** Bibliothèque François-Mitterrand station

**Bus lines:** 25, 62, 64, 71, 89, 132, 325

Contact:

[event@sciences-patrimoine.org](mailto:event@sciences-patrimoine.org)

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