



Patrimarp, Science of Heritage: perspectives on cultural artworks

Laurence Ciavaldini Riviere, Emilie Chalmin, Mélanie Duval, Pauline Martinetto, Pierre Bordet, Karine Froment, Catherine Dejoie, Nils Blanc, Nicolas Holzschuch, Danielle Ziébelin, et al.

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Patrimalp

Univ. Grenoble Alpes



Science of heritage: perspectives on cultural artworks

Development of an integrated and interdisciplinary heritage science

CHALLENGES

Patrimalp aims to:

- Develop an interdisciplinary scientific community at the heart of Univ. Grenoble Alpes
- Create innovative heritage research methods
- Initiate an interdisciplinary academic course on heritage
- Support heritage and culture policies

Carrying out these goals will strongly contribute to the attractiveness and international outreach of Univ. Grenoble Alpes.

A cross-disciplinary project

history of art
archaeology
material sciences
geosciences
restauration and conservation
computing sciences
geography

Links with heritage institutions

Case studies

Antic Theater of Lyon
Epigraphical stone of Vaison-la-Romaine
Saint-Michel de Connexe Priory
Costumes and Jewellery in the Alps
Brocades transposed
Neolithic rock art sites (Rocher du Château, Trou de la Féclaz)

Scientific and technological challenges



Time and space

The innovativ approach developed by Patrimalp consortium is based on carefully selected case studies carried out in the West Alpine region and Rhône corridor, from the Neolithic period to the pre-industrial period.

WP1 - Raw matter ressources and contextualisation

- **PURPOSES:**
 - Identification of raw materials used in the processing of artefacts
 - Socio-ecosystemic contextualization of raw material strategies and rock art production

Integrated study of Neolithic rock art



=> spatio-temporal visualisation
trajectories of supplying strategies

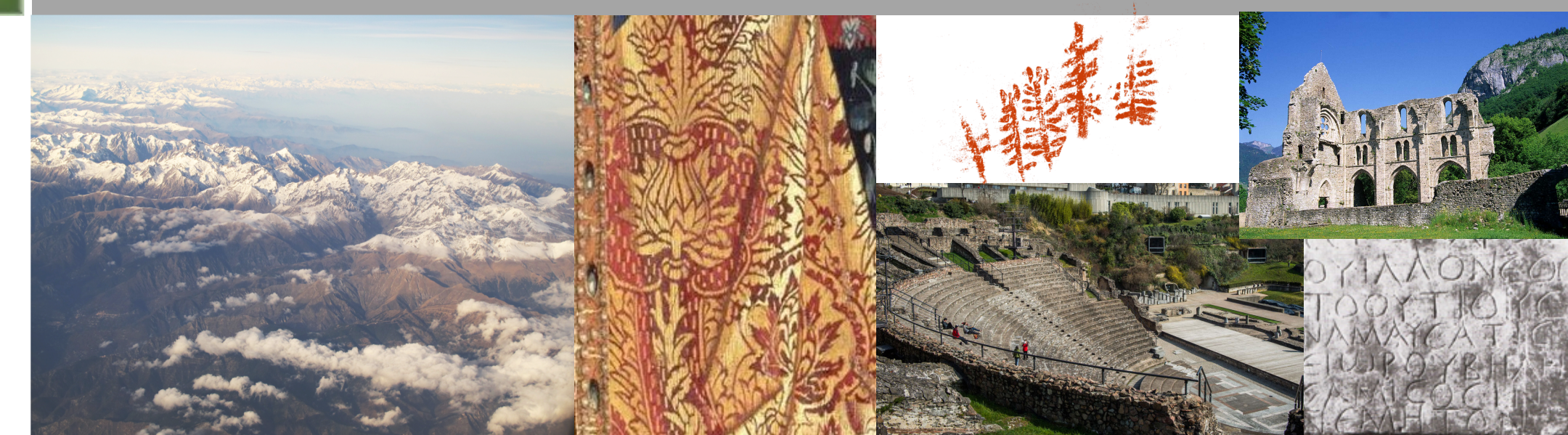
WP3: History, life and trajectories of artifacts

- **PURPOSES: EXTRINSIC ANALYSIS**
 - Artefact story in native cultural context
 - Understanding the artefact as artistic and cultural technical clue
 - Spatial and temporal following tracks
- **SCIENTIFIC APPROACH**
 - Historiography of artefact
 - History of artefact (primary and secondary sources, workshops, treatises, literature)
 - Form and creation life
 - Artistic cartography

Scientific bottlenecks

- ❖ Reconstitute the different "states" of the artefact
- ❖ Develop an ultimate integrated physico-chemical analysis of artefacts
- ❖ Understanding artefact materials through a selective analysis method
- ❖ Dealing with, organising and sustaining heterogeneous multidisciplinary data
- ❖ Write the history of artefacts

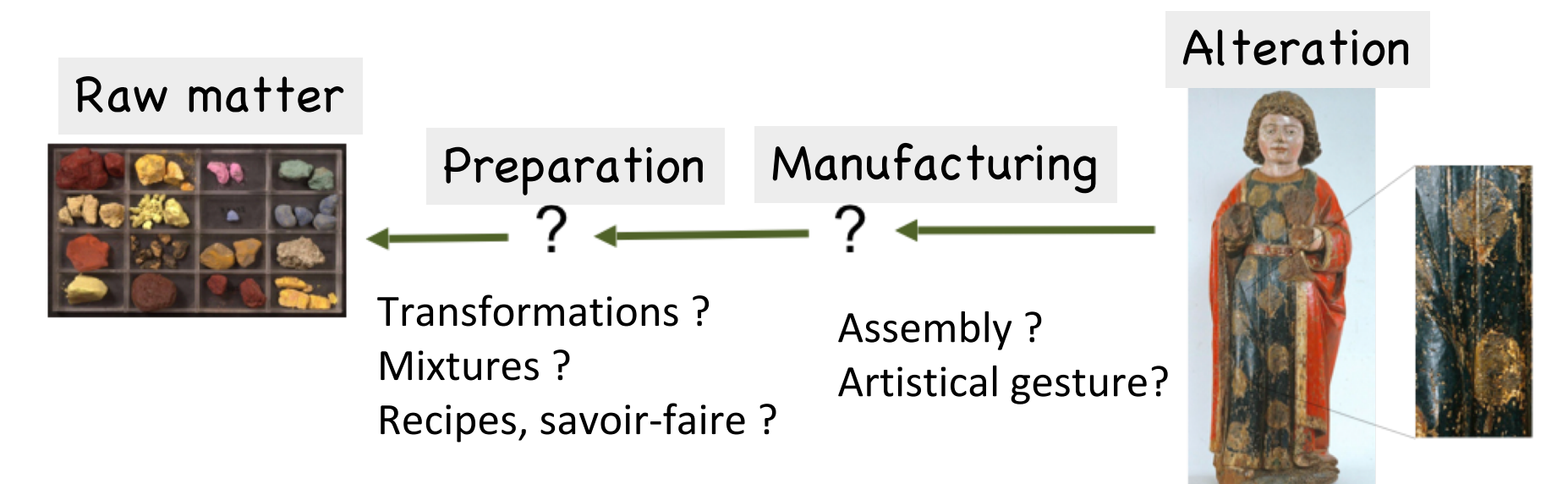
- Production of a common story of the artefact across the time in its environmental and cultural context



WP2 - Materials, manufacturing process and alteration

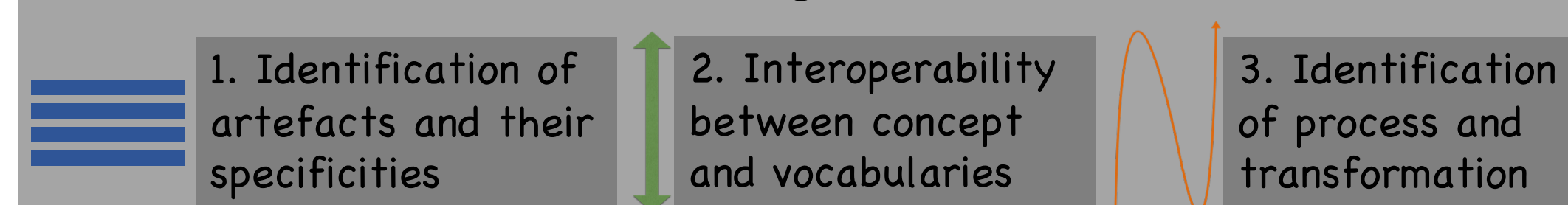
- **PURPOSES: INTRINSIC ANALYSIS**
 - Identification and characterization of constituting matters of artefacts
 - Understanding their manufacturing and alteration

Cultural heritage matter as a « recorder » of artistic human past activities
Identification of « clues » inside the matter



WP4 - Modelling and interconnected visualisation of cultural heritage

- **PURPOSES:**
 - Modelling knowledge and reasoning about heritage artefacts, their components and context
 - Geovisualisation
 - Restitution and Rendering



VISUALISATIONS

Textures, spatial, chronological, upgradable, interactive, 2D, 3D, augmented reality...

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