

## KEY FIGURES: EPICO AT THE PALACE OF VERSAILLES, FRANCE

April 2020



### HISTORY:

The EPICO method was applied to the Palace of Versailles in view of the renovation work scheduled for 2022 in the Northern Central Part of the palace for the modernization of the heating networks, upgrading safety and security and installing air-conditioning. The Northern part included the Louis XV's daughters' apartments, on the ground floor, only recently restored to their original condition as princely apartments. The King's Grand Apartment, on the first floor, used for hosting the sovereign's official acts. For this reason, it was bedecked with lavish Italian-style decoration, much admired by the king at the time, composed of marble panelling and painted ceilings. Louis XIV created a suite of rooms designed for more personal use, which opened onto the Marble Courtyard and the Royal Courtyard. Here he displayed his collections of artworks and paintings. Louis XV made many changes and extended the apartment to the upper floors, creating new rooms, work cabinets, dining rooms, libraries and scientific galleries. These apartments allowed the king to enjoy a certain amount of privacy. In the attic, we can find Louis XV's mistress's accommodations. Madame de Pompadour and Madame Du Barry, both of whom occupied luxury accommodation, in the immediate vicinity of the Small Apartments.

### ORGANISATION:

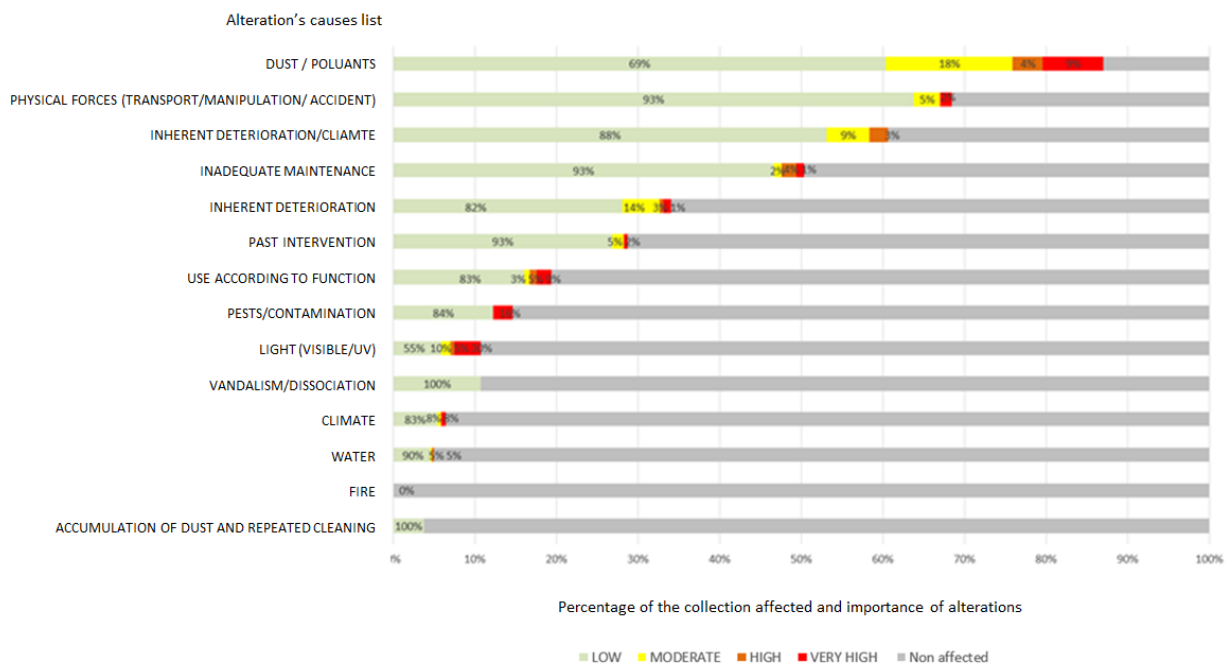
| Assessment steps                                    | Time needed    |
|---|----------------|
| <b>Preparing condition report tools</b><br>2 people | 2 days         |
| <b>Zoning and sampling</b><br>1 person              | 4 days         |
| <b>Collect data</b><br>4 people                     | 8 days         |
| <b>Data treatment</b><br>2 people                   | 2 days         |
| <b>Results and recommendations</b><br>2 people      | 4 days         |
| Total for 87 rooms                                  | <b>20 days</b> |

### RESULTS, northern central part of the palace:

- **1.500** number of inventoried works for the northern part of the palace  
→ **141** works in our EPICO sample
- **87** Rooms → **26** Zones
- **1 173** alteration's causes founded
- **3** actions implemented to improve the conditions of **80%** of the collections:  
new collection maintenance protocols, internal preventive conservation awareness training, animation of a multidisciplinary committee for the air treatment project.

| TYPOLOGY            | NB OF OBJECTS IN THE SAMPLE |
|---------------------|-----------------------------|
| FURNITURE           | 53                          |
| PAINTING            | 15                          |
| GRAPHIC ART         | 4                           |
| SCULPTURE           | 8                           |
| ART OBJECT          | 35                          |
| BUILDING DECORATION | 26                          |
| Total               | 141                         |

## RANKING : alteration's causes impact (object affected by causes + importance of alterations)



The risk assessment was linked to the visible alterations on the collections using a diagnostic approach highlighting the cause and effect relationship. 13 causes of alteration were identified, from the most important to the least important. The objective was to specifically understand the impact of the climate on the collections in order to assess the “cost - benefit” of an air treatment on the overall conservation of the collections. Observation of the collections help to understand and relativize the influence of climate in relation to other weathering factors, the three major ones being, in order: accumulation of dust, physical forces, combined natural aging to climate action.

### The results of the evaluation made it possible to:

- Differentiate between climatic zones and the conservation needs of collections and air treatment depending on the space
- Support the implementation of solutions reducing energy consumption such as building insulation and humidity control through temperature regulation.
- Widen the tolerance ranges (40% <Relative Humidity <70%) according to the state of conservation and the historical climate of the collections with positive effects:
  - Reduction in the number and diameter of air supply and return ducts and their impact on the architectural envelope and historical wall decor
  - Reduction of fluctuations in the event of breakdown of air handling units
  - Expense reduction on the equipment operation
  - Look at the real requirements of all the collections.

### EPICO TEAM OF THE PALACE OF VERSAILLES :

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