



Horizon 2020



D7.2 – Project Graphic Identity

Project Information

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| Grant Agreement Number | 646178 | |
| Project Full Title | Nanomaterials for conservation of European architectural heritage developed by research on characteristic lithotypes | |
| Project Acronym | NANO-CATHEDRAL | |
| Funding scheme | NMP-21-2014 Materials-based solutions for protection or preservation of European cultural heritage | |
| Start date of the project | June, 1 2015 | |
| Duration | 36 months | |
| Project Coordinator | Andrea Lazzeri (INSTM) | |
| Project Website | www.nanocathedral.eu | |

Deliverable Information

| | |
|------------------------------|---|
| Deliverable n° | 7.2 |
| Deliverable title | Project Graphic Identity (LOGO), leaflet and poster |
| WP no. | 7 |
| WP Leader | WG |
| Contributing Partners | - |
| Nature | Report |
| Authors | Vanessa Mucci (WG) |
| Contributors | - |
| Reviewers | Isella Vicini (WG), Maria Beatrice Coltelli (INSTM) |
| Contractual Deadline | M3 – 31/08/2015 |
| Delivery date to EC | M4 – 25/09/2015 |

Dissemination Level

| | | |
|----|--|---|
| PU | Public | ✓ |
| PP | Restricted to other programme participants (incl. Commission Services) | |
| RE | Restricted to a group specified by the consortium (incl. Commission Services) | |
| CO | Confidential, only for the members of the consortium (incl. Commission Services) | |



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Document Log

| Version | Date | Author | Description of Change |
|---------|------------|--------------------|-----------------------|
| V1.0 | 23/09/2015 | Vanessa Mucci (WG) | Complete |
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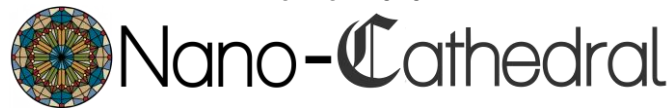


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1 Project graphic identity

1.1 Graphic identity: NANO-CATHEDRAL logo

A project logo (Figure 1) was created when NANO-CATHEDRAL was still at proposal stage.



Figure 1 NANO-CATHEDRAL logo

This logo was presented to and approved by the NANO-CATHEDRAL partners as the official logo of the NANO-CATHEDRAL Project at the kick-off meeting on 4th of June 2016 in Pisa (Italy).

The logo includes the name of the project (NANO-CATHEDRAL), its main concept intends to clear and to capture the attention of the audience. The image of the rose window is a typical element of the churches of the Gothic architectural style and also the font used for the “C” is clearly gothic. This seems to apply very well to an ambitious project with the aim to preserve and protect the European cathedrals.

Colours have been used to get a professional image.

The NANO-CATHEDRAL logo will be used for any (internal or external) deliverable, report and dissemination tools.

1.2 NANO-CATHEDRAL project brochure

The main objective of the project brochure (Figure 2) is to provide our audiences with an attractive and written project overview and a summary of the main project objectives and characteristics. To assist the dissemination effort, an attractive and professionally made brochure will be prepared by WG and published on the project website.

The brochure presents the goals of the project and the main (expected) findings. The text is designed taking into account not only experts, but also an interested non-specialist. It introduces the main mission and the goals of the NANO-CATHEDRAL project. Furthermore, it includes the website address and provides basic information on NANO-CATHEDRAL Consortium. All partners’ logos are also displayed.

A second version of the brochure will be implemented after month 18. This version will contain an updated content, with an overview of preliminary results, and a new layout for making it more attractive.

On the one hand the brochure can be circulated in printed form, e.g. it can be handed out at conferences or other events; on the other hand also an electronic version (e.g. PDF file) can be circulated. The brochure can be also downloaded from the project website.

Some leaflets may be translated into other languages than English by the Partners located in the local pilot sites, based on a master template which will be provided to the partners. The content of the leaflets has to be clear and easily understandable by the target end users.

Figure 2 NANO-CATHEDRAL brochure

PROJECT DETAILS

PROJECT REFERENCE
646178

START
01/06/2015

DURATION IN MONTHS
36

TOTAL COST
6.965.320,43 euros

EU CONTRIBUTION
6.332.586,68 eur

CALL IDENTIFIER
H2020-NMP-2014-two-stage

TOPIC
NMP-21-2014

Materials-based solutions for protection or preservation of European cultural heritage



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Innovation for Cultural Heritage Protection and Conservation



Nano-Cathedral

NANOMATERIALS FOR CONSERVATION OF EUROPEAN ARCHITECTURAL HERITAGE DEVELOPED BY RESEARCH ON CHARACTERISTIC LITHOTYPES



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PARTNERS



VISIT NANOCATHEDRAL WEBSITE
www.nanocathedral.eu

FOLLOW US



The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646178



CATHEDRAL OF PISA



CATHEDRAL OF SANTA MARIA DE VITORIA



CATHEDRAL ST. PETER AND MARY IN COLOGNE

OBJECTIVES

The objective of the Nano-Cathedral project is to provide "key tools" for restoration and conservation:

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

A general protocol will be defined for the identification of the petrographic and mineralogical features of the stone materials, the identification of the degradation patterns, the evaluation of the causes and mechanisms of alteration and degradation, including the correlations between the relevant state of decay and the actual microclimatic and air pollution conditions.

The project will contribute to the development of transnational cultural tourism and to the development of common European shared values and heritage, thus stimulating a greater sense of European identity.

INNOVATION

The results of the project will provide both Innovation in technology and rationalization of the conservation policy affording a renewed knowledge of the complex system "treatment/stone substrate", and of the durability threshold of these treatments.

Innovative materials, such as nano-particle based consolidants and proper polymer nano-composites based coatings will be developed.

In particular, the employment of nano-particle with different composition will allow to provide methods for consolidations, protection and pollutants decomposition, thus preventing part of the degradation and providing long-term conservation, ensuring the development of sustainable and compatible materials and methods.

APPROACH

Multidisciplinary approach; granted by the presence of expertise covering the field of geology and materials science, institutions for management and preservations of the cathedrals, restoration companies and also nano-particles and coating producers.

The industrial partners directly involved in the production processes and technology of restoration will allow the development of affordable methodologies, granting reliability of the developed chain.

Scalability towards industrial needs will be achieved by in situ tests.

Dedicated modelling,
Tailored characterizations,
Standardization of the production,
Treatments application.

This kind of synergy is NANO-CATHEDRAL's key for innovation.

OSLO OPERA HOUSE



SINT-BAAFS CATHEDRAL OF GHENT



ST. STEPHEN'S CATHEDRAL OF WIEN



PARTICULAR: CATHEDRAL OF PISA



KICK OFF EVENT





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1.3 NANO-CATHEDRAL poster

The main purpose of the poster (Figure 3) is to catch the audience attention. The poster will focus on the visual aspects. The content of the posters has to be clear and easily understandable by the target end users.

To reach this objective an eye catching poster has to be designed. With regard to the layout and design, the poster will show the NANO-CATHEDRAL project's logo and the colours emphasizing the link to the project's graphic.

From the content point of view, the poster of the NANO-CATHEDRAL project will illustrate its objectives and include basic information on the project and on the Consortium, including all partners' logos. It will be possible to download it from the NANO-CATHEDRAL website.

The NANO-CATHEDRAL poster will be published 3 times within the NANO-CATHEDRAL project by WG:

- once at the initial phase (month 6 at latest), to convey the project approach and objectives;
- then at Month 18, to highlight project achievements in the first half of the project, and
- finally, at Month 24, to include industrial scale results and demo activities (the poster will be presented at the final NANO-CATHEDRAL conference).

Posters may be translated into other languages than English by the partners located in the different member states and attending local or national events.

Figure 3 NANO-CATHEDRAL Poster



Nano-Cathedral

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



Innovation for Europe
Cultural Heritage
Protection and
Conservation

NANO-CATHEDRAL PROJECT

Cathedrals, distributed throughout Europe, are representative of the diversity of European cultural heritage. **Five different cathedrals were selected** as they may be considered as representative of both different exposure conditions and different types of stones.

In particular, the Cathedral of **Pisa**, in central Italy, and the Cathedral de Santa María of **Vitoria-Gasteiz** in Spain were selected as representative of south European "Mediterranean" climate in coastal and continental regions, respectively; the Sint-Baafs Cathedral of **Ghent**, in Belgium, the Cathedral of St. Peter and Mary in **Cologne**, Germany and the St. Stephen's Cathedral, in **Wien**, Austria, were selected as representative of North European climate in coastal and continental regions, respectively. Moreover, the **Oslo Opera House**, was considered as an example of a contemporary building coated with white Carrara marble.

They also represent different lithotypes such as *marble, sandstone, limestone*.

The objective is providing "key tools" for restoration and conservation:

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

WHAT ARE THE INNOVATIONS?

The results of the project will provide both innovation in technology and rationalization of the conservation policy affording a renewed knowledge of the complex system "treatment/stone substrate", and of the durability threshold of these treatments.

Innovative materials, such as nano-particle based consolidants and proper polymer nano-composites based coatings will be developed, in agreement with the NMP-21 call requirements. In particular, the employment of nano-particle with different composition will allow to provide methods for consolidations, protection and pollutants decomposition, thus preventing part of the degradation and providing long-term conservation. An environmental impact assessment of the new materials will be included, to ensure development of sustainable and compatible materials and methods.

APPROACH

The multidisciplinary approach is granted by the presence of expertise covering the field of geology and materials science, institutions for management and preservations of the cathedrals, restoration companies and also nano-particles and coating producers. The multidisciplinary approach and the inclusion of industrial partners directly involved in the production processes and technology of restoration will allow the development of affordable methodologies, granting reliability of the developed chain.

THIS KIND OF SYNERGY IS NANO-CATHEDRAL'S KEY FOR INNOVATION.

THE SELECTED MONUMENTS

|  |  |  |  |  |  |
|--|---|--|---|--|---|
| PISA | VITORIA | WIEN | KOLN | GHENT | OSLO |
| BUILDING PERIOD Medieval Age | BUILDING PERIOD Medieval Age | BUILDING PERIOD Medieval Age (1140-1513) | BUILDING PERIOD Medieval Age (1248–ca. 1520) 19 th Century (1842 – 1880) | BUILDING PERIOD Medieval Age (942-1038) 14 th -16 th Centuries (1300-ca. - 1569) | BUILDING PERIOD 2003-2007 |
| ARCHITECTURAL STYLE Pisan Romanesque | ARCHITECTURAL STYLE 13 th - 16 th Centuries Gothic | ARCHITECTURAL STYLE Late Romanesque and Gothic | ARCHITECTURAL STYLE Gothic Neogothic | ARCHITECTURAL STYLE Romanesque Brabantine Gothic | ARCHITECTURAL STYLE Contemporary |
| MAIN LITHOTYPES CLASSES Mount Pisano marble /black limestones /Apuan marble /Proconnesian marble /calcarenite /granitoid rocks /serpentinite | MAIN LITHOTYPES CLASSES Lumachella from Ajarte /sandstone from Elguea /calcarenite from Olarizu | MAIN LITHOTYPES CLASSES Limestones from Leitha-mountains and Vienna, few siliceous sandstones from Lower Austria | MAIN LITHOTYPES CLASSES Drachenfels Trachyte / Schlaitdorf Sandstone / Obernkirchen Sandstone / Savonnières Limestone / Volcanic Tuffstones / Basalt lava | MAIN LITHOTYPES CLASSES Arenaceous limestone belonging to the Lede Formation (Belgium), and Belgian and French limestones as replacement materials (from Gobertange, Euville, Savonnières and Massangis) | MAIN LITHOTYPES CLASSES White Carrara marble |

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The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646178

