

Nano-Cathedral



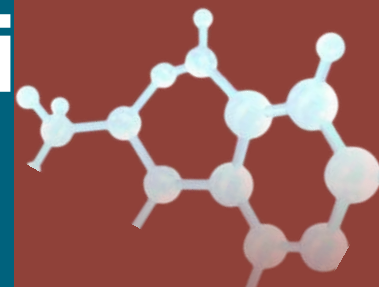
Horizon 2020

OVERVIEW OF THE PROJECT

October 19th, 2015

Bruxelles

Prof. Ing. Andrea Lazzeri
University of Pisa

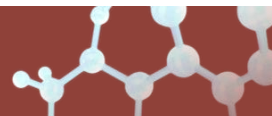




*Innovation
for Cultural
Heritage
Protection
and
Conservation*

**NMP 21 – 2014: MATERIALS-
BASED SOLUTIONS FOR THE
PROTECTION OR
PRESERVATION OF EUROPEAN
CULTURAL HERITAGE**

Specific challenge: Europe has significant cultural diversity together with exceptional ancient architecture, built environment and artefact collections. However time, exposure and environmental changes present significant threats to this cultural heritage (which is one of the assets on which the tourism-related industry relies).

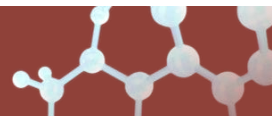


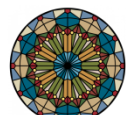


OBJECTIVES

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.





Nano-Cathedral



VITORIA



PISA



GENT



KOLN

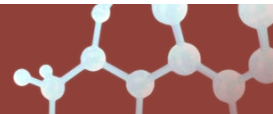
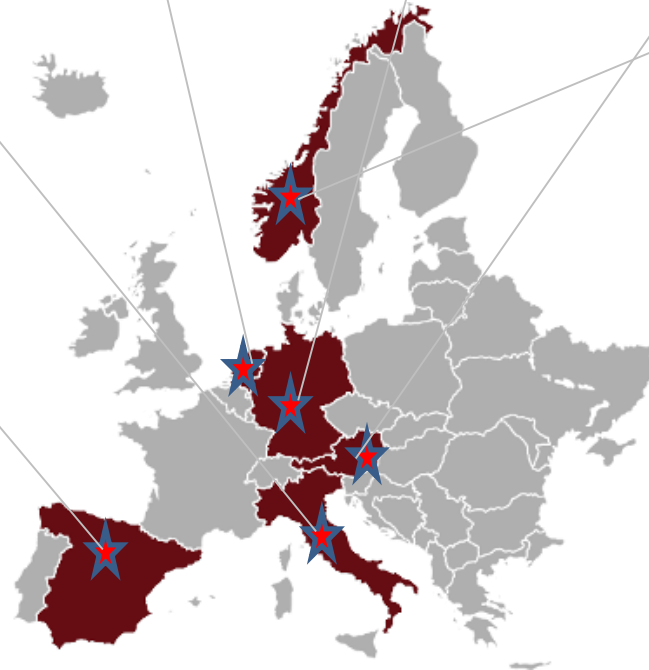


WIEN



OSLO

ITALY
SPAIN
BELGIUM
AUSTRIA
GERMANY
NORWAY

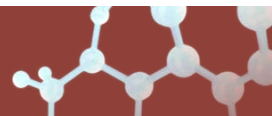


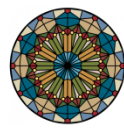
Necessity of **effective** consolidation and protection treatments for stone based monuments →
Foundations

Unavailability of systematic information about treatments and methods →
Research centres

Unavailability of methods and unavailability of suitable nano-treatments on the market →
Restoration companies

Necessity of aggregating the needs of foundations for favouring the developments of nano-products with a wider market →
Companies producing nano-materials





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GROUPS 2:

RESEARCH ENTITIES

- INSTM (Italy) Materials Science
- ISCR (Italy) Preservation and Restoration
- Deputation Foral de Alava
- OTTO-FRIEDRICH-UNIVERSITAET BAMBERG-Building Preservation Science
- IAB-KIT (Germany) Applied Bioscience and Microbiology
- IATCS (Austria) Arts and technology/Conservation Sciences
- FI-IG-TUW (Austria) Geotechnik
- OWS (Belgium) Environmental analysis

Groups 1: CATHEDRAL AND BUILDING FOUNDATIONS

- Opera della Primaziale Pisana, OPA
- Metropolitankapitel Der Hohen Domkirche Koln Dombauverwaltung
- Fundacion De Santa Maria Katedrala
- Dombausekretariat St Stephan
- Architectenbureau Bressers (SintBaasfKathedral)
- Statsbygg

GROUPS 3: NANO- MATERIALS COMPANIES

- Colorobbia consulting srl
- Chemspec
- Tecnan

GROUP 5: MANAGEMENT AND COORDINATION

- Warrant
- WIEDEMANN GMBH
- INSTM

GROUP 4: RESTORATION COMPANIES OR ENTITIES

- Opera della Primaziale Pisana, OPA
- Dombauhütte Metropolitankapitel der Hohen Domkirche Köln
- Architectenbureau Bressers
- Fundacion De Santa Maria Katedrala
- Dombausekretariat St Stephan

