OVERVIEW OF THE PROJECT

October 19th, 2015
Bruxelles

Prof. Ing. Andrea Lazzeri
University of Pisa
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).
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.
VITORIA
PISA
GENT
KOLN
WIEN
OSLO

ITALY
SPAIN
BELGIUM
AUSTRIA
GERMANY
NORWAY

Overview – October, 19th 2015
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*
Overview – October, 19th 2015

**Groups 1: Cathedral and Building Foundations**
- Opera della Primaziale Pisana, OPA
- Metropolitankapitel Der Hohen Domkirche Köln Dombauverwaltung
- Fundacion De Santa Maria Katedrala
- Dombausekretariat St Stephan
- Architectenbureau Bressers (SintBaalstKathedral)
- Statsbygg

**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 3: Nano-Materials Companies**
- Colorobbia consulting srl
- Chemspec
- Tecnan

**Groups 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

**Groups 5: Management and Coordination**
- Warrant
- WIEDEMANN GMBH
- INSTM