Horizon 2020

Nano-Cathedral

D7.6 – Workshop in Ghent

Project Information

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°	41
Deliverable title	Workshop in Ghent
WP no.	7
WP Leader	WIED
Contributing Partners	Architectenbureau Bressers (17) Technische Universität Wien (16), Metropolitankapitel Der Hohen Domkirche Köln Dombauverwaltung (7), Fundacion Catedral Santa Maria (11), Organic Waste Systems (18), Otto-Friedrich-Universität Bamberg (8)
Nature	
Authors	Architectenbureau Bressers (17)
Contributors	
Reviewers	
Contractual Deadline	October 31 2017
Delivery date to EC	November 13 2017

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)	

Table of Contents

1 INTRODUCTION

On Tuesday the 24th of October, local professionals in field of architecture and stone conservation were provided with a program consisting of theoretical lectures in the morning and practical demonstrations in the afternoon. The lectures dealt with the issues surrounding the Balegem stone, existing and innovative techniques for its conservation, and the research conducted in the Nano-Cathedral project.

In the afternoon, several test methods were demonstrated, giving participants insight in state of the art research procedures and the assessment and comparison of new and existing products. On top of that, partakers got the chance to get acquainted with products available on the market and got the opportunity to visit the test sites on the Cathedral.

To end the day, external local researchers presented their own findings and test results to the audience to provide an overview of local and international research around the conservation Stone.

Goal of the workshop was to provide in clear and well-substantiated information about (1) Balegem stone, (2) state of the art conservation methods and (3) research on nano technology to local experts.

2 GENERAL INFORMATION

2.1 Title

"Nano-Cathedral workshop in Gent"

2.2 Date:

Tuesday 24/10/2017

2.3 Location:

Sint-Baafshuis, Biezekapelstraat 2, 9000 Gent

2.4 Organizers and Contributors:

Workshop organised by Architectenbureau Bressers bvba (partner ARCHI) and Ghent University (Tim De Kock). Consortium contributions by Jasper Völkert (Dombau Köln) and Matea Ban (TU Wien). External contributions by Nathalie Vernimme (Flemish Government - Dept. of Built Heritage) and Tanaquil Berto (KIK/IRPA).

Open platform contributions by Alexandra Schmölder (University of Bamberg), Barbara Lubelli (Delft University of Technology), Lasse Six (OWS) and Pablo García Lumbreras (Fundación Catedral Santa María).

2.5 Language:

Presentations and demonstrations in Dutch and English.

2.6 Translation service foreseen (yes/no):

No.

2.7 Target Audience:

All people professionally involved with stone conservation (governments, architects, stone restorers, …). The geographical scope of the workshop is defined by the areas in which Balegem stone is commonly used: Flanders and (some parts of) the Netherlands.

The group of attendees consisted of:

- Government officials;
- Independent stone restorers;
- Architects;
- Contractors;
- Producers;
- Members of the church council of St. Baafs;
- Academics;
- Press.

2.8 Foreseen number of people:

Maximum amount of participants: 100.

2.9 Actual number of participating people:

Total number of participants: 66.

2.10 How were participant invited?

Online flyers, distributed by e-mail (using a list of professionals in the field of stone conservation), social media (Facebook and Twitter) and online newsletters or calendars of specialised institutions or websites.

2.11 Used communication tools for workshop visibility/publicity:

Social media (Facebook, Twitter and Instagram) (see annex).

E-mail (distribution of save the date & program flyers, informative mail to press and specialized media).

3 DESCRIPTION OF WORKSHOP

3.1 Objectives and description of the event:

Providing in clear and well-substantiated information about (1) Balegem stone, (2) state of the art conservation methods and (3) research on nano-technology.

3.2 Practical lessons on site:

Practical demonstrations of application methods and on site test methods used during the project: Photographic documentation, DRMS, Karsten tube, Contact sponge, Colour measurements and Microscopic evaluation.

3.3 Assessment of results:

During the meeting, a questionnaire of the Bamberger Centrum für Empirische Studien (BACES) concerning the organisation of the workshop and the (future) use of nano products, was handed out to all participants. Afterwards 30 completed surveys were collected.

3.4 Results and Expected Impacts:

The number of attendees reached 66, of which the most are well known in the field of stone conservation, either as a practitioner, consultant, government official or academic researcher. We can conclude that the workshop reached a rather wide audience. It is expected to have following impact:

Local awareness: For the moment the Belgian restoration community (including academic researchers, on site restorers, architects, consultants and governments) is reluctant towards the use of chemical agents for protection and consolidation of stone. The workshop shall not only create awareness about the new possibilities (products, techniques and research), but can also add to the local discussions about contemporary restoration philosophy and restoration techniques.

Feedback about local relevance: The workshop shall familiarize the local experts (in situ applicants, consultants) with new products and will enable the Consortium to gain feedback about the local relevance (on a scale broader than just the Cathedral) of their specifications and applications.

Economical feasibility: The workshop can cast a light on the local economical feasibility of new commercial products. Do the local experts consider the possibilities and specifications of these products as an added value compared the existing range of products? Would there be a local economical market for these products?

3.5 Modifications from what had been planned in Deliverable D7.5 “Training public plan”:

None.

4 AGENDA

09u00 - 09u15 *Welcome*

09u15 – 12u30 ***Lectures***

09u15 - 09u35 *"Onderzoek rond onroerend erfgoed door de Vlaamse overheid"* (NL)
Translation: *"Research by the Flemish Government concerning Built Heritage"*

by **Nathalie Vernimme**
Advisor Research Programming at the Flemish Government - Dept. of Built Heritage

09u40 - 10u00 *"Verval en conservatie van Ledesteen in een historisch perspectief: de Gentse Sint-Baafskathedraal als case-study"* (NL)

Translation: *"Decay and conservation of Balegem Stone in a historical perspective: Saint-Bavo's Cathedral as case study"*

by **Ignace Roelens**
Project manager / technical & quality manager at Bressers Architecten bvba

10u05 - 10u25 *"Ledesteen in Vlaams erfgoed materiaaltechnisch bekeken "* (NL)

Translation: *"A technical analysis of Balegem Stone in Flemish heritage"*

by **Tim De Kock**
FWO Postdoctoral researcher at Ghent University - Dept. Geology

10u25 - 10u55 *Coffee break*

10u55 - 11u15 *"Stand van zaken: consolidatiemogelijkheden en -beperkingen van Ledesteen met producten op basis van ethylsilicaat "* (NL)

Translation: *" State of the art: possibilities and limitations of consolidating Balegem stone with products based on ethylsilicate "*

by **Tanaquil Berto**
Collaborator at the laboratory dept. of KIK/IRPA (Royal Institute for Cultural Heritage)

11u20 - 11u40 *"Efficiency and compatibility of newly engineered nano consolidants "* (ENG)

by **Matea Ban**
Reseacher at Institute of Geotechnics of TU Wien and member of the Nano-Cathedral consortium

11u45 - 12u25 *"Testing of on-site applications: methodologies and results of the Nano-Cathedral project in Ghent "* (ENG)

by **Jasper Völkert**
Stone restorer at Dombau Köln and member of the Nano-Cathedral consortium
and **Tim De Kock**
FWO Postdoctoral researcher at Ghent University - Dept. Geology

12u30 - 13u45 *Lunch break*

13u45 - 15u30 ***Workshop / practical demonstrations***

Practical demonstrations of applications and test methods used during the project.

15u30 - 15u50 *Coffee break*

15u50 - … ***Open platform***

Open platform to allow local experts, external to the consortium, to share their findings on the topics discussed, giving the attendees an overview of local and international research around this topic. Open platform contributions were provided by the following people (consortium members are indicated with *):

- **Alexandra Schmölder** (*), University of Bamberg - Institute of Archaeology, Heritage Studies and Art History
- **Dr. Barbara Lubelli**, Associate Professor at the Delft University of Technology- Faculty of Architecture and the Built Environment - Department Architectural Engineering + Technology - Research coordinator Heritage & Architecture
- **Lasse Six** (*), Project Manager Sustainability Assessment Services at OWS nv
- **Pablo García Lumbreras** (*), Stone restorer at Fundación Catedral Santa María

5 LINKED ACTIVITIES

During the meeting, a questionnaire of the Bamberger Centrum für Empirische Studien (BACES) concerning the workshop and the (future) use of nano products, was handed out to all participants. During the welcoming, participants were encouraged to fill in this survey. This was repeated just before the lunch break and after the open platform. Afterwards 30 completed surveys were collected.

6 ANNEXES

6.1 Official dissemination material:

6.1.1. ‘Save the date’ flyer

Sent to a list of local professionals in the field of stone conservation, restoration and architecture on 11/09/2017.

6.1.2. Final flyer with program and enrolment info

Sent to a list of local professionals in the field of stone conservation, restoration and architecture on 03/10/2017.

— 24 OKTOBER 2017 —

Nano-Cathedral WORKSHOP in Gent

Deze workshop kadert in een Europese studie naar het gebruik van nanomaterialen voor de duurzame bescherming en consolidatie van verschillende natuursteensoorten, gebruikt in historische gebouwen doorheen Europa. Het voormiddagprogramma bestaat uit enkele lezingen waarin de problematiek omtrent Ledesteen aan bod komt, net als de wijze waarop bestaande en innovatieve technieken en onderzoeken hierop een antwoord proberen te bieden. In de namiddag staan enkele praktische demonstraties gepland.

PROGRAMMA

08u30 - 09u00	Onthaal		
09u00 - 09u15	Verwelkoming en inleiding		
09u15 - 09u35	Onderzoek rond onroerend erfgoed door de Vlaamse overheid	Nathalie Vernimme	Agentschap Onroerend Erfgoed
09u40 - 10u00	Verval en conservatie van Ledesteen in een historisch perspectief: de Gentse Sint-Baafskathedraal als case-study	Ignace Roelens	Bressers Architecten
10u05 - 10u25	Ledesteen in Vlaams erfgoed materiaaltechnisch bekeken	Tim De Kock	Universiteit Gent - Vakgroep Geologie
10u25 - 10u55	Koffiepauze		
10u55 - 11u15	Stand van zaken: consolidatie mogelijkheden en beperkingen van Ledesteen met producten op basis van ethylsilicaat	Tanaquil Berto	KIK/IRPA
11u20 - 11u40	Efficiency and compatibility of newly engineered nano consolidants	Matea Ban	Vienna University of Technology
11u45 - 12u25	Testing of on-site applications: methodologies and results of the Nano-Cathedral project in Ghent	Jasper Völkert Tim De Kock	Dombau Köln Universiteit Gent - Vakgroep Geologie
12u30 - 13u45	Lunch		
13u45 - 15u30	Workshop		
15u30 - 15u50	Koffiepauze		
15u50 - ...	Open platform / discussiemoment		

OPEN PLATFORM

Op het einde van de workshop, krijgen ook onderzoekers, fabrikanten, restaurateurs, ... die buiten dit project bezig zijn met natuursteenconservatie, de kans om hun case-studies, proefresultaten of applicatieresultaten te delen met de groep. Indien u hiervoor interesse hebt, ontvangen wij graag een beknopte samenvatting van uw presentatie op architectuur@bressers.be. Uiterlijke datum: maandag 16 oktober 2017.

LOCATIE

Sint-Baafshuis | Biezekapelstraat 2 | 9000 Gent

VOOR WIE

De workshop is bedoeld voor iedereen die beroepsmatig geconfronteerd wordt met de conservatie van Ledesteen. De inschrijvingen zijn beperkt tot 100 plaatsen!

Inschrijven kan door een mailtje te sturen naar architectuur@bressers.be met vermelding van uw voornaam + naam, bedrijf of instelling, telefoonnummer en mailadres. De inschrijving is pas geldig nadat we u een bevestigingsmail hebben gestuurd.

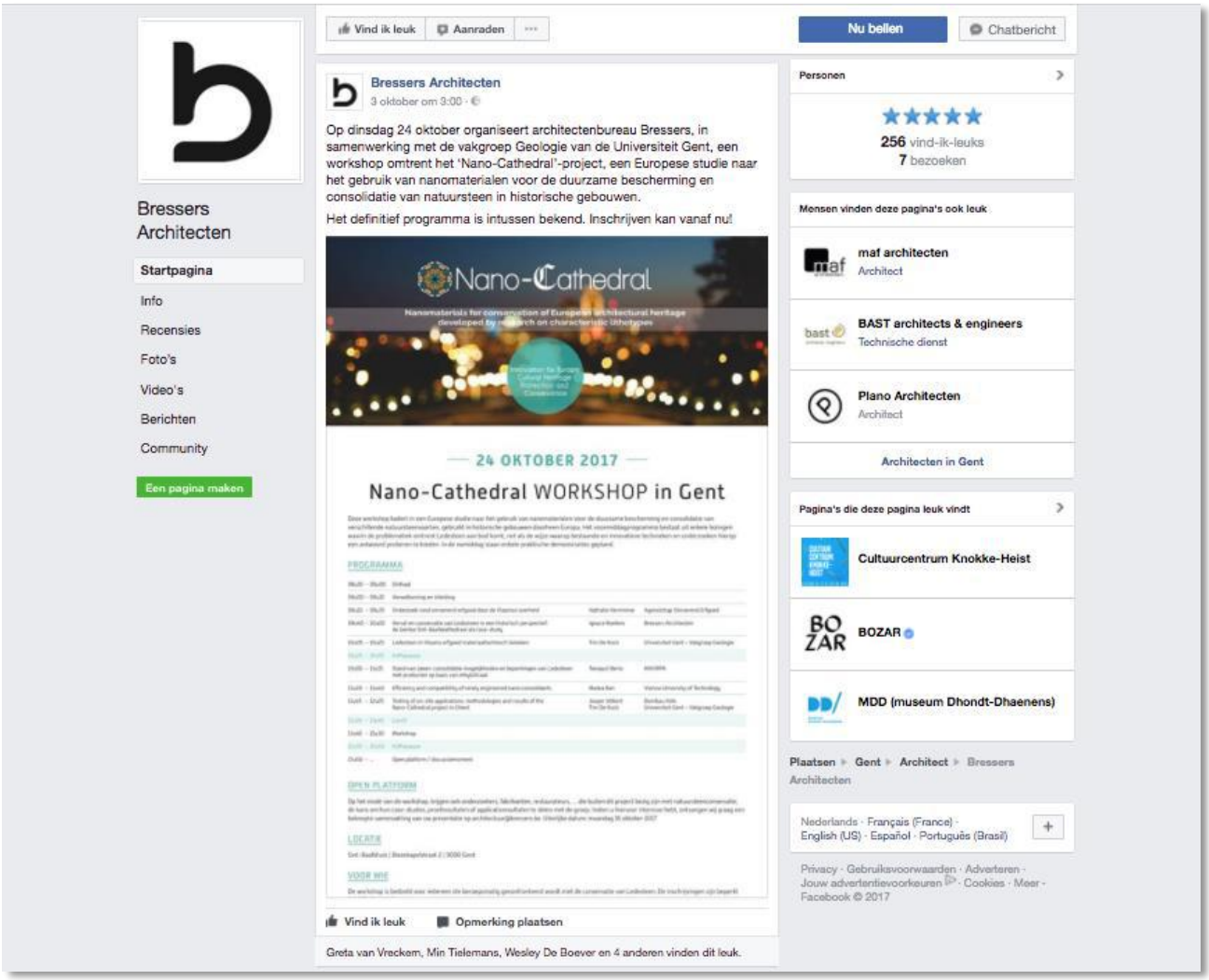
ORGANISATIE

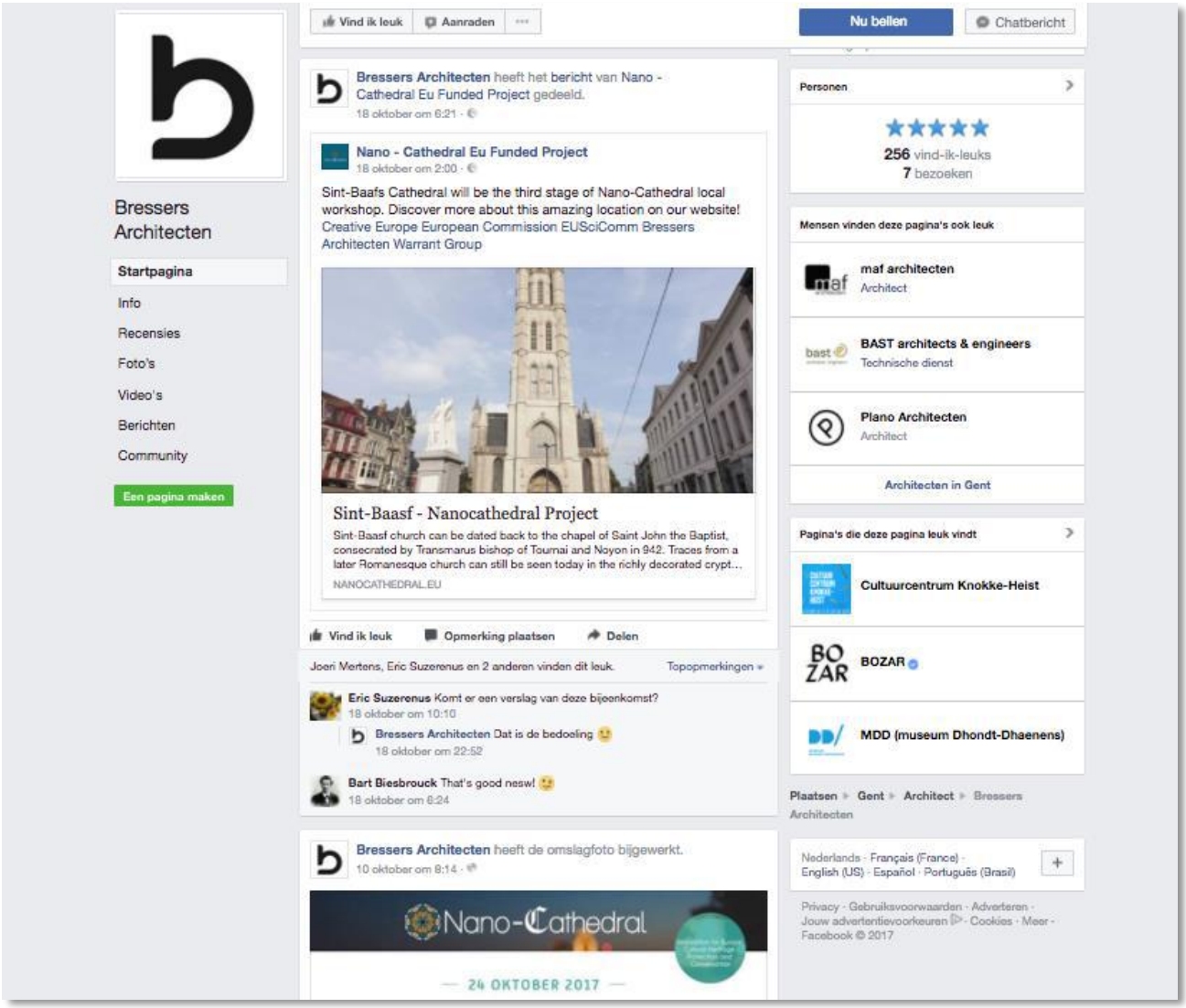
BRESSERS ARCHITECTEN In samenwerking met GHENT UNIVERSITY FACULTY OF SCIENCES DEPARTMENT GEOLOGY RESEARCH GROUP PROGRESS

The 'Nano-Cathedral'-project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646178
www.nano-cathedral.eu

6.2 Dissemination on websites and social media:

6.2.1. Facebook

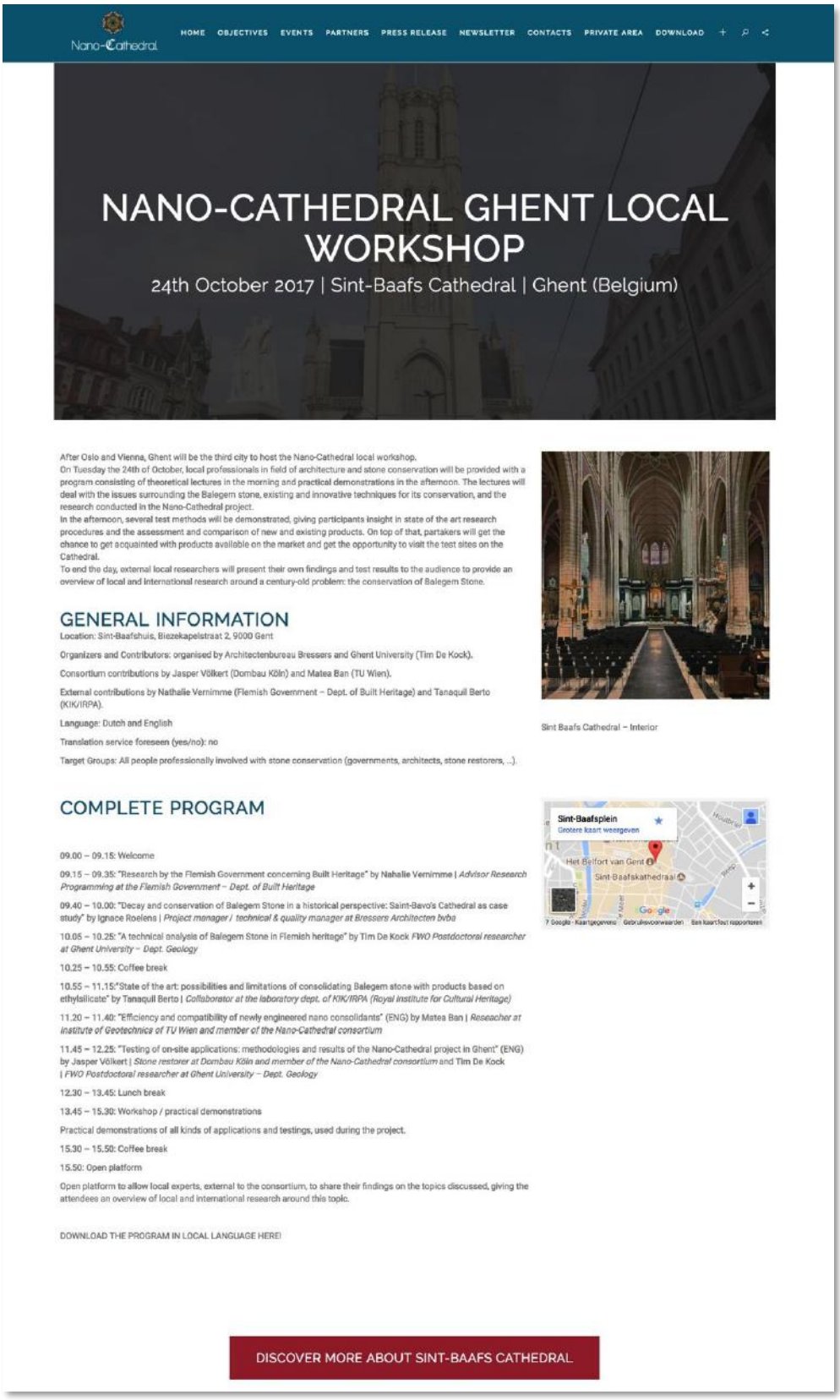



Vind ik leuk
Aanraden
Nu bellen
Chatbericht
Bressers Architecten
Startpagina
Info
Recensies
Foto's
Video's
Berichten
Community
Een pagina maken
Bressers Architecten heeft het bericht van Nano - Cathedral Eu Funded Project gedeeld.
18 oktober om 6:21
Nano - Cathedral Eu Funded Project
18 oktober om 2:00
Sint-Baafs Cathedral will be the third stage of Nano-Cathedral local workshop. Discover more about this amazing location on our website! Creative Europe European Commission EUSciComm Bressers Architecten Warrant Group
Sint-Baasf - Nanocathedral Project
Sint-Baasf church can be dated back to the chapel of Saint John the Baptist, consecrated by Transmarus bishop of Tournai and Noyon in 942. Traces from a later Romanesque church can still be seen today in the richly decorated crypt...
NANOCATHEDRAL.EU
Vind ik leuk
Opmerking plaatsen
Delen
Joeri Mertens, Eric Suzerenus en 2 anderen vinden dit leuk.
Topopmerkingen
Eric Suzerenus Komt er een verslag van deze bijeenkomst?
18 oktober om 10:10
Bressers Architecten Dat is de bedoeling
18 oktober om 22:52
Bart Biesbrouck That's good news!
18 oktober om 6:24
Bressers Architecten heeft de omslagfoto bijgewerkt.
10 oktober om 8:14
Nano-Cathedral
24 OKTOBER 2017
Personen
256 vind-ik-leuks
7 bezoeken
Mensen vinden deze pagina's ook leuk
maf architecten
Architect
BAST architects & engineers
Technische dienst
Plano Architecten
Architect
Architecten in Gent
Pagina's die deze pagina leuk vindt
Cultuurcentrum Knokke-Heist
BOZAR
MDD (museum Dhondt-Dhaenens)
Plaatsen ▸ Gent ▸ Architect ▸ Bressers Architecten
Nederlands · Français (France) · English (US) · Español · Português (Brasil)
Privacy · Gebruiksvoorwaarden · Adverteren · Jouw advertentievoorkeuren · Cookies · Meer · Facebook © 2017

6.2.2. Twitter/Instagram


Bressers architecten @bressersarch · 24 okt.
Tim De Kock van #ugent over ledesteen in Vlaams erfgoed @Nanocathedral @ugent #horizon2020 #culturalheritage
LEDESTEEN IN VLAAMS ERFGOED
MATERIAALTECHNISCH BEKEKEN
Tim De Kock
1

6.2.3. Nano-Cathedral website



Nano-Cathedral HOME OBJECTIVES EVENTS PARTNERS PRESS RELEASE NEWSLETTER CONTACTS PRIVATE AREA DOWNLOAD

NANO-CATHEDRAL GHENT LOCAL WORKSHOP

24th October 2017 | Sint-Baafs Cathedral | Ghent (Belgium)

After Oslo and Vienna, Ghent will be the third city to host the Nano-Cathedral local workshop.
On Tuesday the 24th of October, local professionals in field of architecture and stone conservation will be provided with a program consisting of theoretical lectures in the morning and practical demonstrations in the afternoon. The lectures will deal with the issues surrounding the Balegem stone, existing and innovative techniques for its conservation, and the research conducted in the Nano-Cathedral project.
In the afternoon, several test methods will be demonstrated, giving participants insight in state of the art research procedures and the assessment and comparison of new and existing products. On top of that, partakers will get the chance to get acquainted with products available on the market and get the opportunity to visit the test sites on the Cathedral.
To end the day, external local researchers will present their own findings and test results to the audience to provide an overview of local and international research around a century-old problem: the conservation of Balegem Stone.

Sint Baafs Cathedral – Interior

GENERAL INFORMATION

Location: Sint-Baafshuis, Biezekapelstraat 2, 9000 Gent

Organizers and Contributors: organised by Architectenbureau Bressers and Ghent University (Tim De Kock).

Consortium contributions by Jasper Völkert (Dombau Köln) and Matea Ban (TU Wien).

External contributions by Nathalie Vernimme (Flemish Government – Dept. of Built Heritage) and Tanaquil Berto (KIK/IRPA).

Language: Dutch and English

Translation service foreseen (yes/no): no

Target Groups: All people professionally involved with stone conservation (governments, architects, stone restorers, ...).

COMPLETE PROGRAM

09.00 – 09.15: Welcome

09.15 – 09.35: "Research by the Flemish Government concerning Built Heritage" by Nahalie Vernimme | *Advisor Research Programming at the Flemish Government – Dept. of Built Heritage*

09.40 – 10.00: "Decay and conservation of Balegem Stone in a historical perspective: Saint-Bavo's Cathedral as case study" by Ignace Roelens | *Project manager / technical & quality manager at Bressers Architecten bvba*

10.05 – 10.25: "A technical analysis of Balegem Stone in Flemish heritage" by Tim De Kock *FWO Postdoctoral researcher at Ghent University – Dept. Geology*

10.25 – 10.55: Coffee break

10.55 – 11.15:"State of the art: possibilities and limitations of consolidating Balegem stone with products based on ethylsilicate" by Tanaquil Berto | *Collaborator at the laboratory dept. of KIK/IRPA (Royal Institute for Cultural Heritage)*

11.20 – 11.40: "Efficiency and compatibility of newly engineered nano consolidants" (ENG) by Matea Ban | *Researcher at Institute of Geotechnics of TU Wien and member of the Nano-Cathedral consortium*

11.45 – 12.25: "Testing of on-site applications: methodologies and results of the Nano-Cathedral project in Ghent" (ENG) by Jasper Völkert | *Stone restorer at Dombau Köln and member of the Nano-Cathedral consortium* and Tim De Kock | *FWO Postdoctoral researcher at Ghent University – Dept. Geology*

12.30 – 13.45: Lunch break

13.45 – 15.30: Workshop / practical demonstrations

Practical demonstrations of all kinds of applications and testings, used during the project.

15.30 – 15.50: Coffee break

15.50: Open platform

Open platform to allow local experts, external to the consortium, to share their findings on the topics discussed, giving the attendees an overview of local and international research around this topic.

DOWNLOAD THE PROGRAM IN LOCAL LANGUAGE HERE!

DISCOVER MORE ABOUT SINT-BAAFS CATHEDRAL

6.3 Workshop photo's:

Figure 1 Introduction by Ignace Roelens (Architectenbureau Bressers).

Figure 2 Attendees.

Figure 3 Lecture by Tim De Kock (Ghent University - Dept. Geology).

Figure 4 Information booklet, handed out to all attendees.

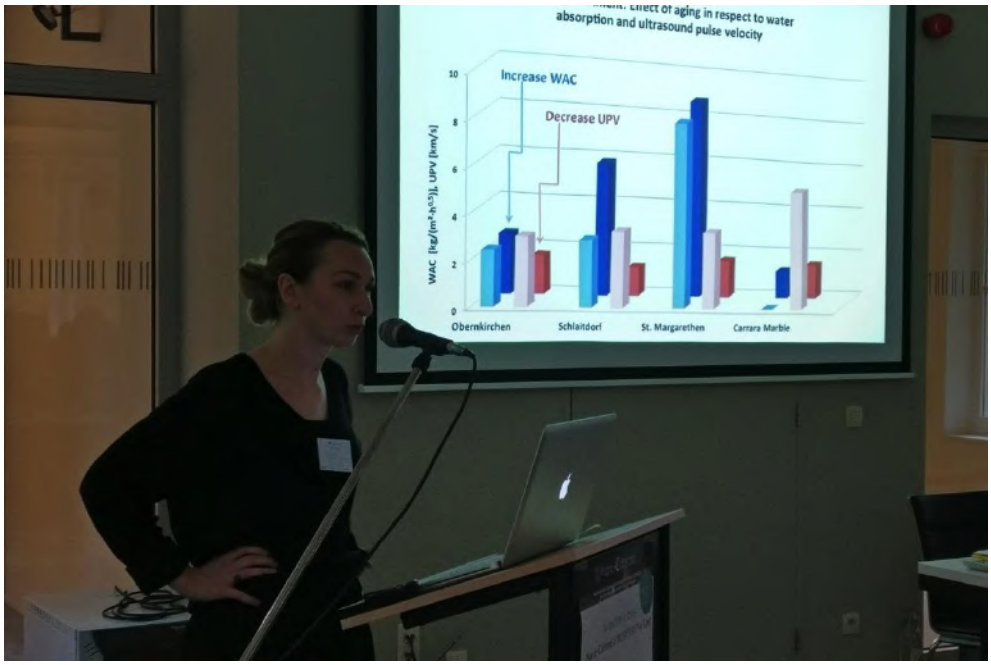


Figure 5 Lecture by Matea Ban (TU Wien - Institute of Geotechnics).

Figure 6 Demonstration of microscopical analysis.

Figure 7 Demonstration of available commercial products (Remmers).

Figure 8 Demonstration of the application process by Pablo García Lumbreras (Fundación Catedral Santa María).

Figure 9 Demonstration of colour measurements, Karsten Tube and Contact Sponge by Tim De Kock (UGent - Dept. Geology)

Figure 10 Slideshow depicting the activities performed on the St. Baafs Cathedral.