



# changes

Changes in Cultural Heritage Activities: New Goals and Benefits for Economy and Society

[www.changes-project.eu](http://www.changes-project.eu)

# changes

Changes in Cultural Heritage Activities: New Goals and Benefits for Economy and Society

CHANGES is a European Project supported by the JPI Heritage Plus program.

Considering the diversity of European cultural heritage, the skills required in built heritage activities and the spread of environmentally sustainable approaches, the research aims at

**producing new local models directed to support  
Planned Preventive Conservation, Maintenance and Monitoring.**

The **main topics** are:

- conservation and valorisation as preventive measures;
- effectiveness of maintenance, involving relevant craftsmanship and expertise;
- economic mechanisms underlying built heritage conservation in the context of regional economy and the wider construction sector;
- impact of knowledge gain and its dissemination on smart economy for built heritage conservation, heritage management and construction sector.

The **expected outcomes**, to be transferred to stakeholders and society, in order to increase social and human capital at a local level are:

- a better understanding of cultural heritage;
- an empowerment of local communities;
- a progress of protection quality of built heritage;
- environmental enhancement;
- an improved cost-effectiveness for private owners and managers of historic properties;
- a proposal for a funding scheme supporting a sustainable conservation process.

# changes

Changes in Cultural Heritage Activities: New Goals and Benefits for Economy and Society

## Partners:

- **Politecnico di Milano**, ABC Department
- **Katholieke Universiteit Leuven**, MAT Division
- **Uppsala University**
- **Delft University of Technology**, Heritage & Architecture Section
- **Foppoli Moretta e Associati**



**POLITECNICO  
MILANO 1863**  
DIPARTIMENTO DI ARCHITETTURA,  
INGEGNERIA DELLE COSTRUZIONI  
E AMBIENTE COSTRUITO



## Associate Partners:

- Monumentenwacht Noord-Brabant
- Monumentenwacht Flanders
- Consorzio Villa Reale e Parco di Monza
- Navarra Gestioni
- Assimpredil ANCE, Association of Building and Related Companies of Milano, Lodi, Monza e Brianza provinces



## Work Packages:

1. Project Management.
2. Conceptualization of previous experiences: **MonumentenWacht** in Belgium and in the Netherlands, **Halland Model** in Sweden, **Distretti Culturali** in Italy.
3. Implementation of maintenance systems: investigation on efficacy of maintenance practices in Belgium.
4. Implementation of maintenance systems: investigation on efficacy of maintenance practices in The Netherlands.
5. Implementation of maintenance systems: investigation on efficacy of maintenance practices in Italy.
6. Economic analysis of costs and benefits of preventive conservation practices (monitoring and maintenance systems).
7. Analysis of economic and societal impacts and externalities of valorisation strategies including conservation activities.
8. Dissemination and transfer.

**WP4****IMPLEMENTATION OF MAINTENANCE SYSTEMS:  
INVESTIGATION ON EFFICACY OF MAINTENANCE PRACTICES IN THE NETHERLANDS****Responsible**

**Principal Investigator 3:** Prof. Silvia Naldini, Technische Universiteit Delft, Heritage & Design.

**Partners involved**

- **Principal Investigator 3:** Prof. Silvia Naldini, Technische Universiteit Delft, Heritage & Design.
- **Associate partner:** Monumentenwacht NoordBrabant.

**Methodology adopted**

Action Research.

**Timing**

November 2015 – October 2017

**Abstract**

A mirrored to WP3 approach was developed by TU Delft in cooperation Monumentenwacht NoordBrabant, in a specific Dutch context (that is to say in a specific legislative and organisational context). A Postdoc researcher investigated the effectiveness of the interventions carried out in 16 selected cases in two regions (similar to the Belgian cases for what concerns region, type of building and function). Further, per region, half of the number of case studies was selected in which recommended interventions were not carried out and the other half in which they were undertaken. MDDS was used for the condition assessment.

MDDS is an expert system and decision tool for the diagnosis of the damage found in monuments. The system was originally developed within the EU Environment Programme (contract EV5V-CT92-0108). In the course of time, its software has been regularly updated to be adapted to the developments in the field of ICT and new knowledge related to the conservation of cultural heritage has been implemented [van Hees et al. 2008; van Hees, Naldini, Lubelli 2009]. Working with MDDS could guarantee that a common methodology of research was employed, whereby starting with the definition of the damage found, based on an atlas of illustrated decay terms, hypotheses could be made on the damaging mechanism(s) responsible for it, under given circumstances and further investigation techniques were indicated to evaluate the hypotheses.

Similar to the Belgian case studies, data were gathered by:

- condition assessment, that means focused on the physical conservation of the property;
- reports from Monumentenwacht NoordBrabant, which contain information on maintenance and management;
- interviews and focus groups on collaboration schemes, awareness, social benefits, boundary conditions.
- checking expenses and estimating costs of suggested maintenance works;

The work of the Post Doc researcher consisted in the first place in structuring the research, for what concerns its theoretical and practical part, strongly cooperating with and, when necessary, guiding the PhD researcher in Leuven. The Postdoc researcher used MDDS for the controls and explored the possibility of linking (parts of) MDDS to the investigation tool of Monumentenwacht.

**Link to other WPs**

Gathered information were processed both in WP6 and WP7.

**TABLE OF CONTENTS**

<b>STUDY OF MW NORTH BRABANT – 40 YEARS' ACTIVITY .....</b>	<b>p. 6</b>
<b>ONLINE ENQUIRY AMONG MEMBERS OF MW NORTH BRABANT .....</b>	<b>p. 6</b>
<b>MEETING MONUMENTENWACHT NORTH BRABANT AND FLANDERS .....</b>	<b>p. 9</b>
<b>SPIN OFFS OF THE RESEARCH .....</b>	<b>p. 9</b>
<b>IMPORTANT FOR THE FRAMEWORK OF THE RESEARCH WERE INTERVIEWS .....</b>	<b>p. 9</b>
<b>REFERENCES .....</b>	<b>p. 10</b>

## STUDY OF MW NORTH BRABANT – 40 YEARS' ACTIVITY

The assessment of the theory and the *modus operandi* of the organisation in practice (16 cases studies) led to some hypotheses on its value and role within the Dutch Heritage Conservation system/philosophy (as expressed by the RCE, Cultural Heritage Agency of the Netherlands).

*"It seemed that the original tasks of MW had changed from signalling damage and performing some maintenance interventions to giving advice on interventions and supporting the owners of non-iconic buildings (thus most owners)"* (Heinemann and Naldini, 2017).

## ONLINE ENQUIRY AMONG MEMBERS OF MW NORTH BRABANT

Based on the insight of case studies carried out during the research project CHANGES, questions arose which required quantitative responses which could not be answered on the case studies alone. These questions related in particular to how members perceive the task of Monumentenwacht, and how the inspection results are applied in practice. Furthermore, it was asked whether members would be interested in workshops related to the works of Monumentenwacht, inspections, and conservation.

An **enquiry** carried out among owners who are members of the Monumentenwacht organisation in North Brabant has confirmed the hypotheses and provided interesting information to better understand the conservation philosophy and practice in the Netherlands.

In total, 192 members participated in the survey, and from which 191 owned a building which was inspected by Monumentenwacht North Brabant. With 122 responds (64%) the largest group were private owners, followed by religious institutions (36 responds), municipalities (15 responds) and 18 responses from others. Together, the respondents owned more than 330 buildings<sup>1</sup> which are inspected by Monumentenwacht North-Brabant; this is about 20% of all objects inspected by MW in 2016. Of the objects referred to in their answers, 77% (147) were national monuments, 21% (39) municipal monuments and 2% (4) not listed. It is noteworthy to say, that of 147 national monuments, 87 (59%) are owned by private owners, an aspect which is relevant when it comes to funding options for maintenance.

During the case studies and interviews carried out prior to the survey, it was noticed that the members understood the tasks of Monumentenwacht differently, varying for a supportive instrument to signal damage to the only source for advice. To understand whether this is a wider phenomenon, members were asked in the survey to choose in their opinion the two main tasks of Monumentenwacht from a list of nine options. The majority (68%) considered that to give advice about possible maintenance works as the main task, followed by giving advice about possible repairs (36%) and timely signalling of damage (35%). The commonly referred to service of the cleaning of gutters (4%) and the evaluation of works carried out by third parties (10%) were not considered as so important.

When considering the different owner types, the emphasis slightly changes. 70% of the private owners consider advice about maintenance as the main task, followed by timely signalling of damage (36%) and giving advice about possible repairs (35%). For religious institutions, 58% responded that advice about maintenance was the main task, 39% giving advice about possible repairs and 36% timely signalling of damage. Municipalities followed the trend of the main two aspects of advice about maintenance (67%), advice about repair (35%), yet consider the giving of an overview of observations as third important aspect (33%).

---

<sup>1</sup> 21 respondents owned 4 or more buildings.

When having to choose between only two options, the perception of the respondents shifted: overall, signalling and documentation of observation were considered as the main task (70%) contrary to give advice on necessary measures (29%). (1% considered neither of the two). Yet when looking at the responses according to the type of owner, it can be noticed that 93% of the respondents from municipalities, but only 65% of the private owners consider signalling and documenting of observation as a main task.

Participants, who considered giving advice about measurements as the main task, were asked what they understood as advice. 77% understood it as advice on how repairs should be carried out; 43% as how the owner can carry out minor (maintenance) tasks by himself; and 39% as explaining whether a specialist should be consulted due to the possible severity of the damage.

The majority of respondents carried out the recommended measurements partially (54%), 27% all and 19% stated that they did not carry out the recommended works. The main motivation to carry out the works was amongst all groups was the desire to prevent further damage (63%), followed by the argument that it was recommended by Monumentenwacht (57%). For private owners, the fact that the works were recommended by Monumentenwacht was with 60% even of a higher influence. Only 21% stated that the works were planned beforehand and only 14% considered tax benefits or subsidies as a motivation to carry out works. Again, there is the indication that Monumentenwacht is of a stronger influence for private owners.

Motives not to follow the recommendations of Monumentenwacht were that an intervention was not considered urgent (51%), the costs of the intervention (37%), and postponing of the works in order to carry them out with other works (39%). 4% of the respondents mentioned that they did not agree with the advice given by Monumentenwacht, and therefore did not carry out the works. In particular, municipalities (20%) disagreed with the recommendations given by Monumentenwacht. Only 1% of the respondents could not find a contractor or specialist, and therefore were not able to carry out the works. In 3% of the cases, the owners did not receive a permission to carry out the recommended works.

Choices were made according to costs and urgency, and the visibility of the damage, and repairs at less visible locations were postponed. Occasionally, owners had to wait until their preferred contractor had time to carry out the works.

Minor works which were not carried out were replacing the putty of windows, changing of the type of roof tiles, placing of hatches, painting, and replacement of flagstones. Examples of mayor works were the replacement of entire roofs, partial replacement of rotten roof structures, repointing of joints, and replacement of windows.

When looking at who carried out the works, differences can be seen again among the four groups. Private owners chose in most cases (49%) a contractor without a background in conservation, and only in 40% a contractor with specialisation in conservation. 23% of the works were carried out by the owner himself.<sup>2</sup> Whereas religious institutions chose in 69% of the works a contractor specialised in conservation and in 31% a contractor without a specialisation in conservation. These results could indicate a possible vulnerability in both the conservation and maintenance process as not all contractors without a conservation background might be aware of the additional demands of conservation. This becomes even more crucial considering that additional research is seldom carried out. Also vagueness in the terminology adds additional risks as contractors not familiar with conservation and damages related to historic buildings might not notice possible underlying damage causes and hence might not choose a suitable intervention strategy.

*"For most objects (other than iconic buildings) hardly any specialist is called in to make a diagnosis of the damage found and to direct further investigations when needed"* (Heinemann and Naldini, 2017).

---

<sup>2</sup> As it is not known which type of works were carried out, this might not be in all cases a bad thing (consider cleaning gutter, placing fire extinguishers).

Most owners rely on the authority and support of MW inspectors and do not consider the intervention of an expert necessary. The Cultural Heritage Agency, on the other hand, has neither the task to supervise, nor enough personnel to provide experts for all buildings needing them.

*"Most owners are not aware of the necessity or of the economic advantage of (lab) research and sound diagnosis"* (Heinemann and Naldini, 2017).



## MEETING MONUMENTENWACHT NORTH BRABANT AND FLANDERS

- Notwithstanding the fact the Monumentenwacht Flanders differs in team formation (architect + craftsman) and type report (not only signalling damage and severity rating, but also calculating costs of interventions, meaning involvement in market and drafting long term maintenance plans), most problems are similar and mainly concern the fact that interventions are merely done on the basis of the report, without any further investigation and thus without a sound diagnosis.
- Even though the members of MW Flanders could get scientific support and support for investigations (laboratory of KIK), a sound diagnosis is often not made in practice
- Inspections of MW Flanders occur every 2-3 years (inspections are more expensive and less frequent than in Netherlands): further investigations (when done on the basis of the report) and results of interventions are not recorded in the reports, as the inspectors visit the building again after a too long time. For the same reason, due to the time lapse, no evaluation of the work carried out by contractors can be done and monitoring is difficult.

## SPIN OFFS OF THE RESEARCH

As MW (not only in the North Brabant Province) is presently seen as the only authority by many owners, it was decided to empower the inspectors by means of knowledge transfer. The idea is that they learn more about the state of the art of the research around certain (recurrent) problems (like rising damp) and “*better understand the limits of a visual inspection*” (Naldini et al., 2017). Also meeting with owners are planned to show them the need for specialists’ support and further investigations.

- A workshop has been organized in September 2017 for the inspectors of MW North Brabant (damage assessment and monitoring).
- An information session will be held in December for owners of North Brabant: recurrent problems like humidity-salt in walls will be discussed. It will be an occasion for showing the importance of further investigations (in situ – laboratory). Monumentenwacht Gelderland and Flanders will also be invited.
- Information sessions for inspectors are foreseen, whereby TU Delft-TNO scientists will explain the state of the art around matters like application of plasters on salt loaded walls, rising damp etc.
- Co-operation with MW Gelderland will start in December.
- Co-operation: the involvement of MW in research projects on conservation and re-use of buildings is considered essential.

The discussion in the last meeting (Sweden) was important to better understand the different approaches to conservation in the countries of the partners. Beside differences in tasks and responsibilities, also used terms may have a different meaning.

In the Netherlands contractors play a fundamental role – over the quality of their activities a paper is sent to the conference in Leuven (Professionalism RLICC thematic week 2018).

Specialised craftsmen (also MW inspectors) are not enough and thus they are needed, but it is difficult to engage young people in this sector.

## IMPORTANT FOR THE FRAMEWORK OF THE RESEARCH WERE INTERVIEWS

- Donatus, the largest Insurance company in the Netherlands, insuring most churches, helped understand critical issues.
- RCE over the policy of the Dutch Government on the quality of interventions and professionalism.
- Restoration architects on the role of the architect in restoration.

## REFERENCES

- Heinemann, H. A. and Naldini, S. (2017). The role of Monumentenwacht: 40 years theory and practice in the Netherlands. In K. Van Balen and A. Vandesande (eds), *Proceedings of the International Conference "Innovative built heritage models and preventive conservation", 6-8 February 2017, Thematic Week Leuven*. Series: Reflections on Cultural Heritage Theories and Practices. Leiden: CRC/Balkema.
- Naldini, S., Heinemann, H. A. and Van Hees, R.P.J. (2017). Monumentenwacht and Preventive Conservation: Changes. In K. Van Balen and A. Vandesande (eds), *Proceedings of the International Conference "Innovative built heritage models and preventive conservation", 6-8 February 2017, Thematic Week Leuven*. Series: Reflections on Cultural Heritage Theories and Practices. Leiden: CRC/Balkema.
- Van Hees, R.P.J., Naldini, S. and Nijland, T (2015). *The importance of a Monumentenwacht system - The situation in North-Brabant*. Delft: TU Delft, TNO.

# changes

Changes in Cultural Heritage Activities: New Goals and Benefits for Economy and Society

Uploaded in December 2017.