

## **DIAGNOSIS Project**

2017-1-ES01-KA203-038254

### **Short-term joint staff training event (C3) Geomatics and remote sensing and 3D models, linked to diagnosis process**

**From 21<sup>st</sup> to 25<sup>th</sup> May 2018  
CEF WUT, room 206  
Al. L. Kaczyńskiego 16, Warsaw, Poland**

The partners will exchange knowledge and experiences, learning from each other, and debate about how to develop curriculum and training methodologies on specific topics concerning the geomatics and remote sensing and 3D models, linked to diagnosis process. These topics are considered necessary for future "Building Diagnosis Experts".

The aim of the event is to agree on a common pattern to be applied to training programs for "Building Diagnosis Experts" in the four Partner Countries. At the same time partners from the different countries will check their own state of the art on the comparative research, orientating and focusing it to the issues emerged during the discussions.

#### **Selection and profile of the participants**

The selection of participants is done internally by each partner (one per partner, except local ones). We must consider its necessary link to the institution and the activities of the Project, as well as its specialization in the theme of the event.

#### **Participants:**

RehabiMed – Xavier Casanovas

Polytechnic University of Catalonia (UPC) –Montserrat Bosch

University of Ferrara - Fabiana Raco

Warsaw University of Technology (WUT) - Paweł Nowak

AEEBC - Toni Floriach

Polish Association of Building Managers (PSMB) – Jacek Zawistowski

Centoform S.r.l. – Alberto Gulinelli

**Monday 21<sup>st</sup> May 2018**

10:00 - Reception of participants and presentation of the targets of the course and the meeting  
- Xavier Casanovas / Paul Nowak

10:45 - Coffee break

11:00 - Practical applications laser scanning for buildings diagnostics (theoretical intro,  
practical application at the Faculty building, data treatment, case studies)

Tutors - Piotr Bartosiak, Bożena Łozińska

15:00 - Lunch

16:00 - Summary discussion on course program on laser scanning - all Partners

**Tuesday 22<sup>nd</sup> May 2018**

10:00 - Photogrammetric for building diagnostics (theoretical intro, practical application of  
drone around the Faculty building, data treatment, case studies)

Tutors - Piotr Bartosiak, Bożena Łozińska

14:00 - Lunch break

15:30 - Assessment of moisture content in structural timber

Tutor - Anna Al Sabouni - Zawadzka

16:30 - Summary discussion on didactic materials on Photogrammetric and timber diagnostics  
- all Partners.

**Wednesday 23<sup>rd</sup> May 2018**

9:00 - Chosen equipment for diagnostics specialist (theoretical intro, practical application at  
the Faculty building, data treatment, case studies), PART I:

- Ultrasonic testing (UPV),
- Impact – Echo method (IE),
- Ground Penetrating Radar (GPR),
- Infrared Thermography (IR),
- Schmidt hammer applications,
- Layer thickness measurements,
- Construction geometry measurements

Tutors - Grzegorz Adamczewski, Jarosław Medyński, Kamil Załęgowski

13:00 - Lunch break

Visit to the Old Town in Warsaw and Museum of Warsaw (rebuilding and restoration of  
Warsaw Old Town) - all Partners

**Thursday 24<sup>th</sup> May 2018**

10:00 - Chosen equipment for diagnostics specialist (theoretical intro, practical application at the Faculty building, data treatment, case studies), PART II:

- Construction durability diagnostics – chloride and CO<sub>2</sub> aggression,
- Carbonation measurements of concrete,
- Presentation of humidity measuring equipment,
- Complementary non-destructive methods (NDT) for concrete,
- IR diagnostics of bridge deck hydro insulating materials

Tutors - Grzegorz Adamczewski, Jarosław Medyński, Kamil Załęgowski

12:00 - Summary discussion on course program on chosen equipment - all Partners.

12:30 - Professional profile proposal for the “Building Diagnosis Expert”, continuation from courses C1 and C2, issues related to the C3 course subject and C1-C3 summary - all Partners.

13:30 - Lunch break

15:00 - Debate and agreement on the professional profile for the “Building Diagnosis Expert”, continuation from courses C1 and C2, issues related to the C3 course subject and C1-C3 summary - all Partners.

**Friday 25<sup>th</sup> May 2018**

09:00 - Academic program proposal for the “Building Diagnosis Expert”, continuation from courses C1 and C2, issues related to the C3 course subject and C1-C3 summary - all Partners.

11:00 - Coffee break

11:30 - Debate and agreement on the academic program for the “Building Diagnosis Expert”, continuation from courses C1 and C2, issues related to the C3 course subject and C1-C3 summary - all Partners.

13:30 - Lunch break

15:00 - Conclusions, remarks and course evaluation - Xavier Casanovas.

17:00 - End of the course