ITN-DCH www.itn-dch.eu

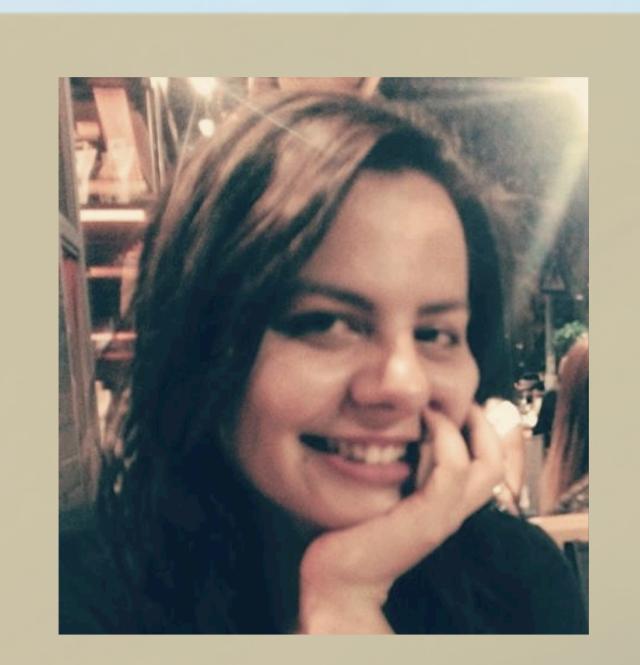




NIKOLETTA SKORDAKI, ESR14

ENVIRONMENTAL FACTORS IN DIGITAL CULTURAL HERITAGE

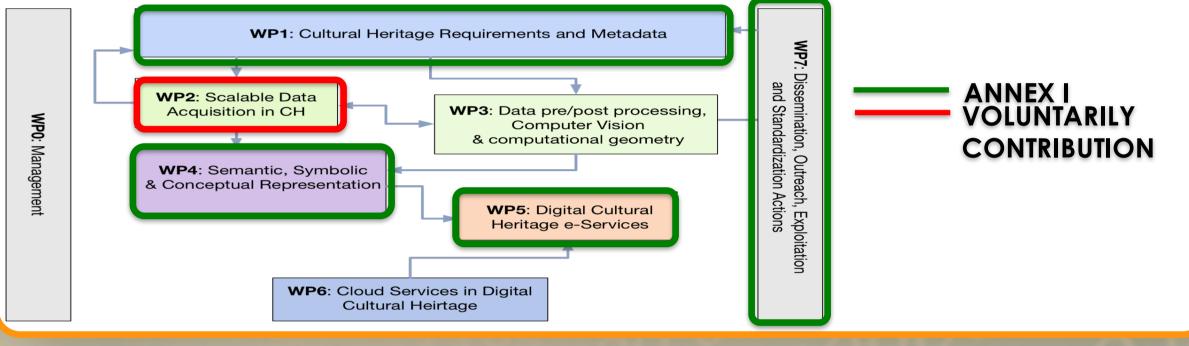
- Study of the long-term environmental factors and their influence on the built Cultural Heritage
- Study of the decay processses
- Examination of materials physicochemical properties
- Assessment of the environment's impact to buildings' structure
- Study of the application of 3D models for the real time protection of the movable and immovable Cultural Heritage



SCIENTIFIC BACKGROUND

- Chemical Engineer, School of Chemical Engineering, National Technical University of Athens (NTUA), Greece
- MSc 'Mathematical Modeling in Modern Technologies and Financial Engineering', School of Applied Mathematical and Physical Sciences, NTUA, Greece
- MSc 'Protection of monuments Direction: Materials and maintenance intervention', School of Architecture, NTUA, Greece

WORKPACKAGES INVOLVEMENT WP1: Cultural Heritage Requirements and Metadata WP3: Data pre/post processing



20-24 October 2014 1st ITN-DCH Summer 8 June School, Institute of 2014 Photogrammetry, Start of University of **Fellowship** Stuttgart, Germany

23-26 March 2015 2nd ITN-DCH Workshop, Carnuntum Archaeological Park, Petronell Carnuntum, Austria

4-27 May 2015 Secondment at CNRS, Marseille, France

16.6 -7 July 2015 Secondment at KAAK, Bonn, Germany

31.8 – 4 September 2015 CIPA Conference, Taipei, Taiwan

27 October 2015 European Council's Meeting, Limassol, Cyprus

19.10 -4 November 2015 Secondment at CUT, Limassol, Cyprus

23 May 30.11-5 2016 December ITN-DCH 2015 Workshop, 3rd ITN-DCH CASA2016, Workshop, Geneva, Nicosia, Switzerland Cyprus

Jun. 2014 Jul. 2014 Aug. 2014 Sep. 2014 Oct. 2014 Nov. 2014 Dec. 2014 Jan. 2015 Feb. 2015 May. 2015 Jun. 2015 Sept. 2015 Oct. 2015 Nov. 2015 Dec. 2015 Jan. 2016 Feb. 2016 Apr. 2016 May. 2016 Jun. 2016

FELLOWSHIP TIMELINE

3-8 November 2014 15-18 September 2014 EuroMed 2014, 1-8 June 2014 14-15 July 2015

HISTCAPE final meeting, Podsreda Castle, Slovenia

Limassol, Cyprus

2nd ITN-DCH Summer School, Rhodes, Greece

SEAHA Conference, London, UK

18.7 – 12 August 2015 Secondment at UMU, Murcia, Spain

25 September Researchers' Night, NTUA, Athens, Greece

21.9 – 16 October 2015 Secondment at NTUA, Athens,

Greece

6-9 April 2016 Salone del Restauro, Ferrara, Italy

27.6-1 July 2016 3rd ITN-DCH Summer School & CGI'16 Crete, Greece

LONG TERM ENVIRONMENTAL FACTORS' **CATEGORIES**

The categorization is based on the EU-Chic project (http://www.eu-chic.eu)

EU-CULTURAL IDENTITY CARD -



ENVIRONMENTAL RISKS

LONG TERM INFLUENCES A A₁ Bio-attack **A2** Climate conditions fluctuations **A3** Aeolic impact Water (Ground, Atmospheric) **A5** Solar radiation **A6** Particle matter & aerosols **A7** Long term loading Geological conditions (including **A8**

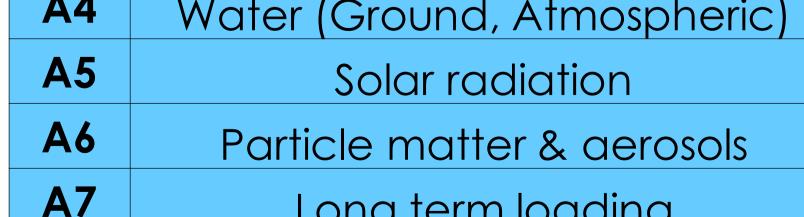
3D MODELS & THE PROTECTION OF CULTURAL HERITAGE

ADVANTAGES Inspection of asset's details

- Regular monitoring
- Cost effective
- High resolution of documentation
- Breakthrough solution for disputed restoration actions



Figure 2. 3D Reconstruction of an ancient vase





Home Country



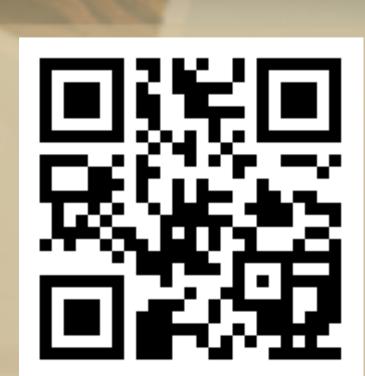
Host Country

local particularities)



Figure 1. 3D Model of St. George, Asinou

Church, Cyprus







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