

2.4 Preserving Architectural Heritage: The Compulsory Interdisciplinary Skills

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**Preserving architectural heritage:
the compulsory interdisciplinary skills**

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SAH - Partners

EU Partners:

- Università degli Studi dell'Aquila (IT), Coordinator
- Rheinisch-Westfälische Technische Hochschule Aachen (DE)
- National Technical University of Athens (GR)

RF Partners:

- Federal State Institution of Higher Education Moscow State University
- Kazan State University of Architecture and Engineering
- Northern (Arctic) Federal University
- Samara State Technical University

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The project: Capacity Building in Sustainability for Architectural Heritage - SAH

SAH is a Curriculum Development project focused on the preparation of a new profile of Architect/Engineer able to restore the buildings belonging to the cultural heritage of the three countries IR, RU, AM, with the support of HEIs from IT, DE, GR.

Even though focused on supporting Institutions from third countries, the tackled problem is highly relevant all over the world since the threats undermining the preservation of cultural and natural heritage are due not only to carelessness and lack of funds but also to new agents of degradation, mainly connected to climate change.

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SAH - Partners

AM Partners:

- National University of Architecture and Construction of Armenia
- Goris State University
- Chamber of Architects of the Republic of Armenia

IR Partners:

- University of Tehran
- Islamic Art University of Tabriz

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SAH – Aims and Objectives

Wider Objective:

To update and improve the quality of curricula in the sphere of Architectural Heritage preservation (Historic BIM and Urban Historic Landscapes) in *Russia, Armenia and Iran* to meet the requirements for a sustainable development.

The main idea is to form a new type of architect-restorers with a good scientific base, able to adapt to the technological evolutions and provide innovative solutions for heritage structures.

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SAH – Aims and Objectives

Specific Project Objectives:

- 1) Development of new interdisciplinary training models for practical-oriented Bachelor and Master degree curricula in Architectural Heritage in line with best EU practices to increase awareness and responsiveness to environmental and economic changes.
- 2) Creation of an interactive platform for education, science, practitioners and authorities in order to form specialists with modern professional competences, responding to the needs of a sustainable society in the sphere of Architectural Heritage.

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SAH – Activities

The main result is the identification of the core of knowledge (new syllabi, new specialisations and new teaching methods) for the formation of an *architect-restorer* with an interdisciplinary competence, both at graduate and post-graduate level, able to provide innovative solutions for heritage structures preservation.

In order to assess the issue comprehensively - from the perspective of employers' representatives and academic staff in the EU, RF, Armenia and Iran - teachers, researchers, restoration companies, employees and representatives of architectural heritage associations are directly involved.

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SAH – Activities

- 1) Up-dating and tuning of the existing curricula in architectural and restoration fields.
- 2) Identification of the specific competences and skills for the new professional profile at BA and MA level.
- 3) Design of a set of courses and training materials, meeting both academic and enterprise demands.
All courses/modules/programmes will cover the items outlined in the ICOMOS Guidelines for Education and training in the conservation of Monuments, Ensembles and Sites (1993).
- 4) Accreditation of the new programmes and pilot teaching.

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SAH – Activities

The new Architect-Restorers will be provided with strong skills in innovative smart technologies and urbanistic research, and ability to understand, analyse and evaluate the constraints related to heritage and the environment in which it is located.

Provided with the dual skills in SMART and digital (BIM) technologies on one side, and in historic urbanistic analysis on the other, the new professionals will be powerful actors in establishing relevant specifications relating to the introduction of historic BIM (HBIM – digital models of heritage projects) and the historical urban landscape.

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SAH – Activities

The Creation of a Network of Multidisciplinary Centres of "Sustainability for Architectural Heritage" (NSAH) at partner universities, will ensure

- The continuation of the cooperation and the establishment of an international research team,
- The creation of international groups of students working together for joint projects,
- The continuous cooperation/consultation with professional experts to assess the quality of these projects,
- The establishment of teachers' and students' mobility schemes and international tracks for the award of double/multiple degrees.

NSAH centres can be seen as Living Laboratories

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Short summary of the presentation

In this meeting we present two experiences made by University of L'Aquila that provide expertise and know-how during SAH implementation:

1. The results of a recently concluded project on the development of a modeling system useful for the short-term prediction of degradation on metals and stone materials that can be estimated from constantly evolving atmospheric agents. These results will be extended to climatic scales to assess the impact of climate change on the potential degradation of outdoor cultural heritage;
2. The ICT support to the restoration of monuments after the earthquake of 2009, that, involving several competences, confirms and explains the need of a multidisciplinary approach.

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