

TAKE Model

The case study of Botanical
Garden in Pavia

18-23 September 2023

UNIVERSITIES INVOLVED:

University of Pavia, Italy (coordinator)

Universidade de Coimbra, Portugal

Alexandru Ioan Cuza University of Iasi, Romania

Universitat Politècnica de Valencia, Spain

FOR WHO:

20 Phd and Master Degree Students of Engineering and
Architecture (5 students from each University)

3 ECTS



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hour	Sunday 17 September 2023	Monday 18 September 2023	Tuesday 19 September 2023	Wednesday 20 September 2023	Thursday 21 September 2023	Friday 22 September 2023	Saturday 23 September 2023	
09:00			Lesson greenhouses	Lesson survey	Lesson model	workshop		
10:00			workshop	workshop	workshop		International Conference Aula Magna	Final Exposition and Conclusion Aula A Orto Botanico
11:00								
12:00								
13:00								
14:00			Lunch Bouvette Bar	Lunch Bouvette Bar	Lunch Bouvette Bar			
15:00		Opening Introduction Activities aula Volta	Lesson UAIC University	workshop	Lesson UPV University			
16:00			workshop		workshop		workshop	
17:00								
18:00		Visit to the Botanical Garden						
19:00		Welcome Cocktail						
20:00								

Preliminary "TAKE Model" timetable

TAKE Model's AIM:

It aims to experiment methods of acquiring knowledge on Cultural Heritage in order to its enhancement and public use. It will focus on a case study of the University of Pavia's heritage, such as the Scopoli greenhouses within the Pavia Botanical Garden as evidence of important historical architectural and constructive value.

The works for the construction of the Botanical Garden and the annexed Chemistry Laboratory began in 1773 and ended in 1775. In this period, Valentino Brusati was called to fill the chair of Botany and promoted, in 1776, the construction of the large wooden greenhouses began on a project by Giuseppe Piermarini, later modified by Leopoldo Pollack.

PRINCIPLE ACTIVITIES

KEY TOPIC LESSONS

For each of them will be interventions by a UNIPV teacher and one or more partner universities, followed by moments of collegial discussion by members of the school's faculty and participants.

1. Historical-archival analysis of Botanical Gardens and in particular greenhouses
2. Survey and morphological analysis using virtual models
3. Construction analysis through technological models of components and elements;
4. Analysis of degradation;
5. Energetic and sustainable greenhouse's behaviour.

TYPES OF ACTIVITIES

Different types of activities will be proposed:

1. on-site inspections and surveys
2. classroom activities with frontal teaching lessons about some key-topics and other comparative case studies
3. laboratory classroom activities for the construction of physical and virtual models and design strategies project.
4. final conference, exposition and roundtable

These activities let to obtain an advancement of knowledge, its transmission and dissemination distinct for different classes of users and the definition of models for the conservation and enhancement of the Cultural Heritage, in particular greenhouses.

DISSEMINATION AND RESULTS

The dissemination activities will be guaranteed through a scientific publication of the results and methods adopted and the creation of a continuous exchange of knowledge also through web pages and social networks.

The material produced, mainly virtual and physical models, will used as a didactic, laboratory and visit support system for different classes of users and in particular to the activities of the Botanical Garden.

Direct results:

1. Contribution to the creation of a digital and physical model of greenhouses (videos, game-models, etc);
2. Implementation of digital databases, H-BIM system, on greenhouses aimed at knowledge and cataloging;
3. Production of design scenarios for valorisation and conservation (physical construction models);
4. investigate the energetic behaviour of the greenhouses in order to improve it and its biodiversity and preserve during the passing of time;
5. Construction of a dynamic model that interacts with the state of the places by virtually simulating project and possible scenarios (immersive experiences)

Indirect results:

1. Promotion of innovative management and cataloging tools for the University
2. Definition of new tools for the knowledge and valorisation project for operators and professionals;
3. Involvement of citizens in improving knowledge and different scenarios for different types of users.

