HeLabS
Cultural Heritage Open Laboratory System

The CHeLabS System:

Methodological Approach

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IMPLEMENTATION STEPS

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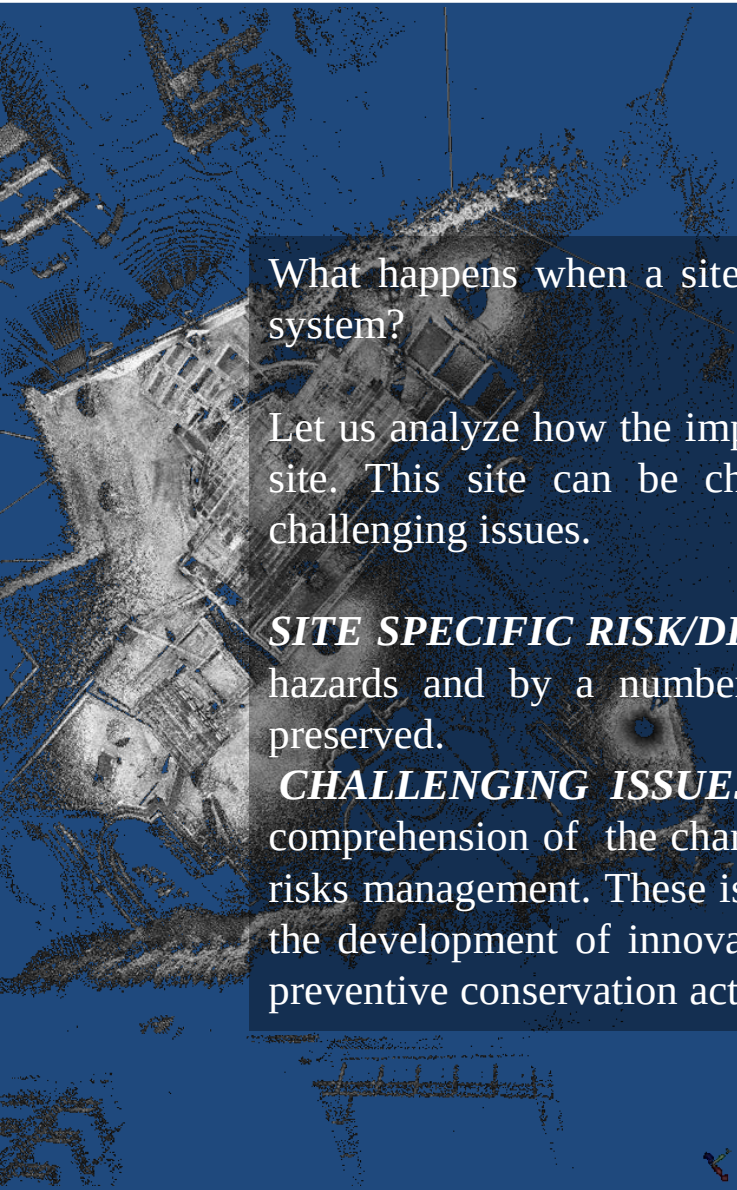

What happens when a site of significant heritage interest becomes a node of the CHeLabS system?

Let us analyze how the implementation of the CHeLabS system is accomplished in a heritage site. This site can be characterized by specific risk/decay problems and a number of challenging issues.

SITE SPECIFIC RISK/DECAY PROBLEMS: Each heritage site is characterized by specific hazards and by a number of decay processes, affecting those assets which need to be preserved.

CHALLENGING ISSUES: some challenging issues may be present, for instance in the comprehension of the characteristic hazard, in the evolution of the decay processes, or in the risks management. These issues require the enhancement of the current knowledge, as well as the development of innovative technologies, and the implementation of new approaches for preventive conservation actions.

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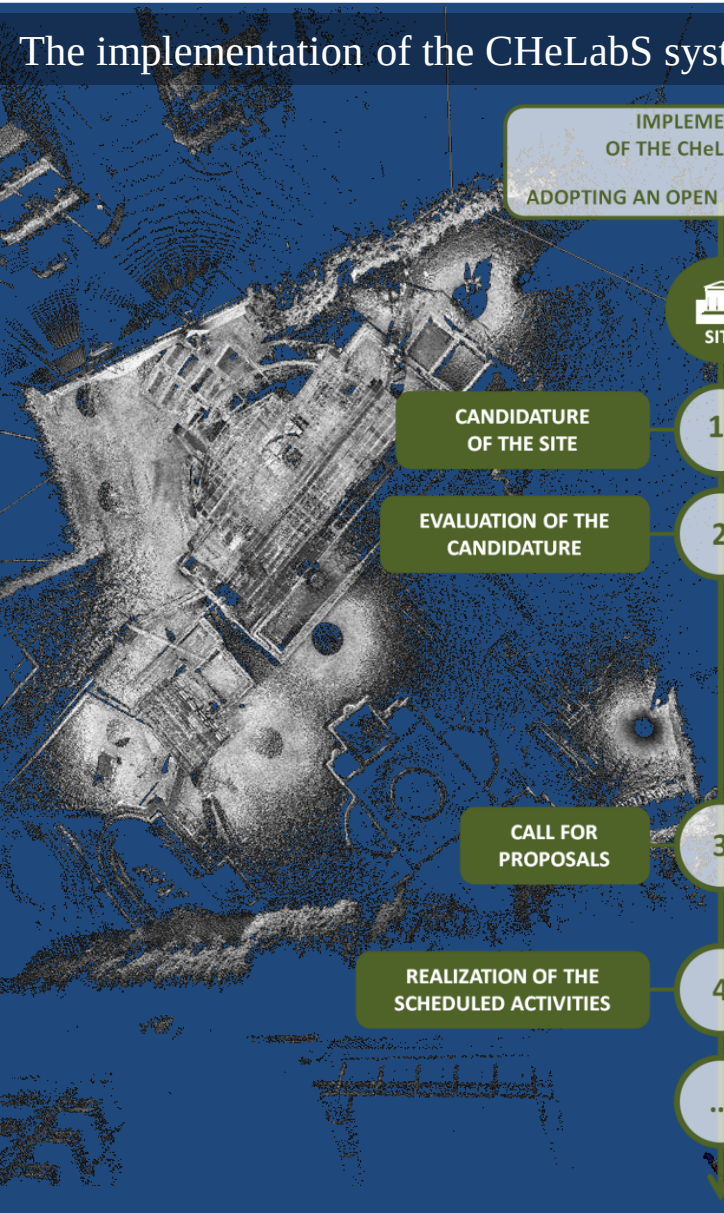
The implementation of the CHeLabS system on a specific site is accomplished through the following phases:



IMPLEMENTATION OF THE CHeLabS SYSTEM

ADOPTING AN OPEN ACCESS POLICY

SITE

THE SITE MANAGEMENT
- candidates the site to the CHelLabS system,
- agrees to adopt an open access policy,
- identifies the specific requirements for the possible users activities.

CANDIDATURE OF THE SITE — 1

EVALUATION OF THE CANDIDATURE — 2

THE ADVISORY BOARD
- evaluates the application,
- analyzes the representativeness of the site with respect to the risk/decay specificity,
- identifies the challenging issues, strategic for the CHeLabS objectives,
- preventively faces all the practical aspects related to the access authorization.

THE SITE NOW BECOMES A NODE OF THE SYSTEM
Advanced instrumentations are made available on the site:
Devices for constant monitoring - Devices for specific studies - Data accessibility

High quality services are implemented on the site:
Site accessibility services – Local team creation.

CALL FOR PROPOSALS — 3

CALLS FOR PROPOSALS are periodically launched to
COLLECT - EVALUATE - SCHEDULE
the future users activities

REALIZATION OF THE SCHEDULED ACTIVITIES — 4

THE SITE STARTS ITS FULL OPERATION PHASE
- hosting the external users activity

THE USERS ACCESS THE SITE
- to perform the scheduled activities.

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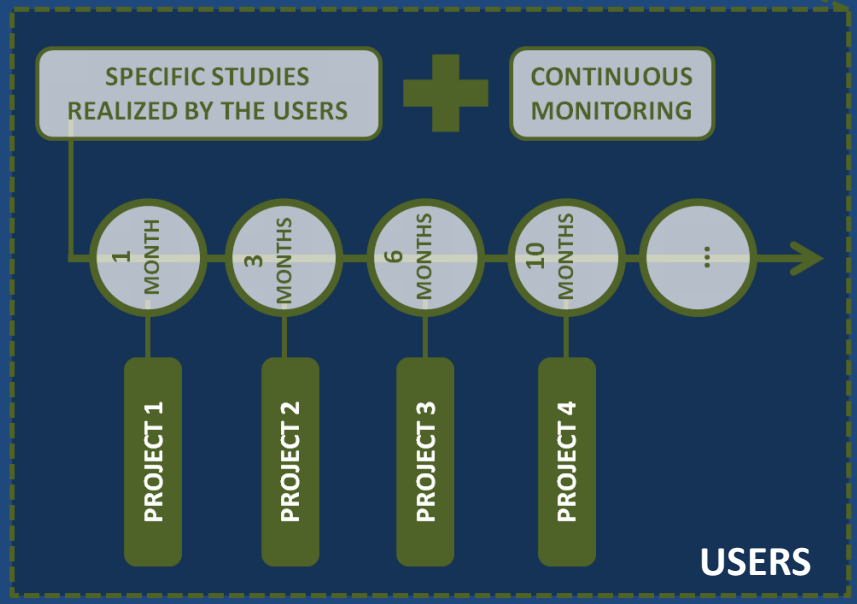

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POTENTIAL ACTIVITIES

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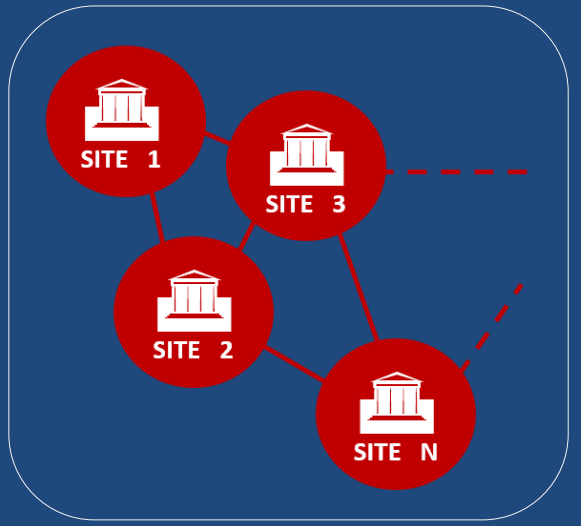
On a CHeLabS site, the Local Unit together with the organization, responsible for the safeguard of the heritage site, define the allowed activities and the requirements useful to regulate the accessibility. The users can access: the ***heritage asset, the state of the art instrumentations, the information and datasets***.

SINGLE SITE

SISTEM OF SITES



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SINGLE SITE

KNOWLEDGE: research on the heritage asset using the instrumentations available onsite

DIAGNOSTICS/MONITORING: research on the risk/decay kinetics using the instrumentations available onsite

TECHNOLOGY: research on the instrumentations brought by the users, or available onsite, used to study the heritage asset

COMPARISON: research on the users' instrumentation, applied to the heritage asset, by means of a comparative analysis using the instrumentations available onsite

TRAINING: professional courses on the study of the heritage asset or on the instrumentations available onsite

VALIDATION: validation of innovative technologies or analytical methods developed by the users, employed on the heritage asset, by integrating the results with previous knowledge and datasets.

PROTOTYPE TESTING: a prototype of an innovative device or instrumental system becomes part of the instrumentations available onsite, to be tested by a great number of users for the applicability assessment and potential improvements

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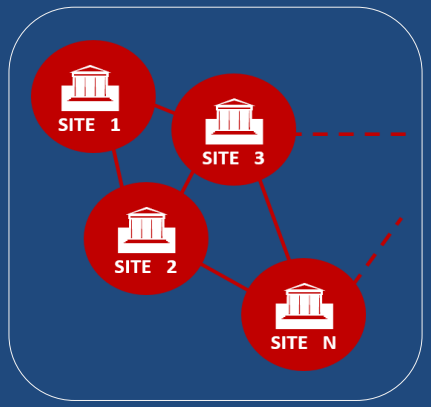

SYSTEM OF SITES

APPLICABILITY: if a user needs to undertake an applicability assessment of an innovative method/device by testing it on different artifacts, he can propose to apply the same experimental method on different heritage assets available on different sites.

This possibility accelerates the time-to-market of new important technologies with a solid background of experimental tests, and their adoption within the conservation practices.

PRACTICES EXCHANGE: if two or more sites of the system present similar elements, a successful practice developed in one of them can be easily verified on the other ones by simple internal bureaucratic procedures.

This possibility accelerates the process for the verification and the adoption of good practices, according to the standards established by the authoritative organizations.

PROTOCOLS/STANDARDS: protocols and new standards can be implemented on a knowledge base, built by integrating the results of the experimentation on different sites.

This possibility helps the harmonization and the standardization processes.

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CONCLUSIONS

The CHeLabS is intended to become a sort of distributed laboratory, attracting competencies and generating excellence, built on the Open Access and Sharing culture.

The effectiveness of the CHeLabS model does not depend on the state of the art technologies that, in a specific period of time, are available on the sites. In this way the implementation of the system is continuously renewed with innovative technologies. The adoption of the open access policy on the sites, combined with accessible advanced technologies and data sharing, amplifies and accelerates the knowledge creation process.

The added value of the CHeLabS approach consists in building the proper context that naturally attracts the major experts who face the challenging issues. This triggers innovation processes in the long-term and the achievement of new solutions to still open problems, not necessarily predictable and planned in the implementation phase. This aspect recalls the well known experience of all the large-scale facilities that, in few decades, have strengthen the growth in many research fields.

Today, the bottom-up character of the participated survey is inspired by these same principles, inviting the heritage science community together with the citizens to configure a new scenario that will guide the CHeLabS system in its future operating phase.

SIMPLIFICATION, SHARING, HARMONIZATION, OPEN ACCESS, INNOVATION, CENTRALITY OF CULTURAL HERITAGE

A PLACE FOR SHARING

http://chelabs.idasc.cnr.it