CHARISMA
Cultural Heritage Academy for Risk Management

PROJECT RESULT N.2

2023

Risk Manager's European skills and competences profile

Skills & Competences Profile of the Risk Manager of CH

Risk Management for Cultural Heritage

Agreement n° 2021-1-IT01-KA220-VET-000034797

WP2

March 2023

WP Leader: ITAM

Author: ALL

Table of contents:

1. Introduction

Objective and scope

Within the framework of the CHARISMA project, WP2 "Risk Manager's European skills and competences profile" focuses primarily on field research and analysis. It is composed of three fundamental activities:

A.2.1 concentrates on the analysis of the skills and competences balance needed to perform different tasks related to risk management of CH in Europe, with particular focus on target Countries;

A.2.2 aiming at a desk review of the professional figures already on the job market and comparison with the EQF framework

A.2.3 presenting the results of a survey with relevant stakeholders about the skills and competences they seek and about the ones they already have in staff.

The document "PR2-Skills & Competencies Profile of the Risk Manager of CH" outlines the main findings of WP2, endorsing the identification of basic characteristics for the CH risk manager. This document meets the following objectives:

- To identify the standing needs for skills and competences in Europe concerning cultural heritage vulnerability and protection.

- To review the existing professional figures in the CH job market in Europe.

- To establish the profile for the future CH risk manager whose role will be of paramount importance to more effective risk management.

- To outline the significance of the CH risk manager, benefits and expected impact.

The following section presents the structure of the report.

Structure of the report

The project report n. 2 "Skills & Competencies Profile of the Risk Manager of CH" is composed of the following sections:

- section 2 presents the responsibilities for the risk manager active in the protection of cultural heritage, outlining the existing professional figures in the CH job market and the required skills and competences;

- section 3 defines the main features of the CH risk manager highlighting the benefits and potential impact for the future of the CH protection sector.
- Finally, interim reports of single activities within WP2 are annexed to the main document in order to allow the reader to access more detailed information (Annex A, B and C).

2. Skills and competences

The burdens of CH management

The analysis carried out among the project partners outlines different scenarios, defining a wide range of skills, competences and responsibilities that the CH risk manager should ideally possess (for further details please see Annex A). The results provide a snapshot of the heterogeneity of perspectives to the topic, stemming from complementary project partners' expertise. They also contextualize the current situation to the Countries belonging to the partnership namely Italy, Czech Republic, Austria and Germany.

According to the Merriam-Webster online dictionary (https://www.merriam-webster.com/), it is possible to define the following key terms as follows:

- **skill** is the ability to use one's knowledge effectively and readily in execution or performance;
- **competence**, instead, is the quality or state of having sufficient knowledge, judgment, skill, or strength (as for a particular duty or in a particular respect);
- **responsibility** is defined as the quality or state of being responsible: such as a moral, legal, or mental accountability, reliability, trustworthiness.

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

Risk management cycle:

Fig.1. Risk management cycle with main tasks

The results, categorized according to the tasks of the risk management cycle (Fig.1) and the dimensions of the analysis (e.g. physical, economic, social etc.), can be summarized as follows:

- The first aspect investigated concerns the CH risk manager's skills and competences. The main findings from the analysis carried out include:

A) *Identify risks*

Physical   Mapping, surveying condition, damage inspection, cataloguing (information systems); understanding materials, artistic techniques and deterioration processes; knowledge of technological facilities security, people safety and fire protection systems.

Economic   Understanding economic value, art and antiques market dynamics and investment supplies. Cost-benefits analysis; statistics; urban and regional planning; management;

understanding intangible cultural value of the asset (contributing to factors such as tourism); identify livelihoods connected to assets.

Social   knowledge of cultural heritage laws and regulations; human and economic geography; anthropology; sociology; anthropological risks, international standards on risk management; knowledge of actors and stakeholders; legal, political, administrative and operational aspects; social impact of disasters. Communication and media, crisis management.

Environmental   Knowledge of natural disasters and environmental risks; knowledge of pathogen agents and degradation factors, biological and chemical agents; understanding climate change effects.

Cultural   Knowledge of anthropology, arts, history, architecture, urban planning, archeology and archival science; Knowledge of local context related to cultural norms and traditions; understanding typologies of cultural heritage; understanding historic value and significance.

B) Risk assess & analyze

Physical   Diagnostic techniques; data mining; GIS; digital skills; Copernicus; basic knowledge of risk management (prioritizing and evaluation of risks) ; basic technical knowledge on impact of agents of deterioration; methodology and tools for risk assessment (hazard mapping and vulnerability evaluation).

Economic   Understanding of KPIs, market trends, and drivers. Awareness of investment and procurement sources; analysis and estimation of economic loss.

Social   Ability to draft public surveys and to analyze results; awareness of local knowledge regarding heritage (memory of residents, observations on damages); social statistics; assessment of risks posed to community harboring the heritage asset if damaged/lost. Identification of local key players (stakeholders).

Environmental   Data mining; prioritization of risks. Life cycle assessment. GIS related to frequency and intensity of extreme events; disaster

risks analysis: identification of key landscape features and or urban features driving or alleviating risk factors.

Cultural

Archival-historical competencies. Digital skills; information management related to the heritage assets; prioritizing cultural assets to protect; expected loss of non-economic value; understanding of values and significance of different types of CH.

C) *Plan action*

Physical

Risk disaster preparedness. Emergency planning; awareness of emergency equipment and material, safe storage sites /refuges; ability to cooperate with emergency responders. Knowledge of policy and regulation for heritage conservation. Cataloging and evaluation of objects; decision making skills; urban planning; science and technologies for cultural heritage conservation and restoration; design of technical measures that reduce vulnerability or increase resilience. Planning skills. Communication skills.

Economic

Understanding budgeting and investment priorities. Cost-benefit analysis; Management of resource planning, decision making skills; funding, investments, insurance; digital competences; Awareness of insurance coverage, policy and regulation for investments. Fundraising competences.

Social

Ability to identify engagement strategies. Laws and regulations; sociology; anthropology; stakeholders analysis; communication and media; knowledge of emergency preparedness and response procedures; international and local policies on cultural heritage and disaster risk management; institutional framework and methods for post disaster recovery and rehabilitation of cultural heritage at international/national /regional levels.

Environmental

Ability to identify engagement strategies. Laws and regulations; sociology; anthropology; stakeholders analysis; communication and media; knowledge of emergency preparedness and response procedures; international and local policies on cultural heritage and disaster risk management; institutional framework and methods for post disaster recovery and

rehabilitation of cultural heritage at international/national /regional levels.

Cultural   Ability to assess priorities of cultural identity assets and to identify possible access methodologies to information. Knowledge of arts, history, architecture and urban planning. Historic documentation of heritage asset and skills required for rebuilding.

D) *Implement action*

Physical   Conservation strategies for building structures and artworks. Ordinary and extraordinary maintenance of structures and implants. Laws and regulations; Knowledge of materials, restoration techniques and tools decision making skills; evacuation and recovery measures; usage of emergency equipment and material; usage of safe storage sites/refuges; cooperation with emergency responders.

Economic   Ability to work within budgetary-constrains and skills to acquire additional funding. Insurance coverage and investments implementation. Cost-benefits analysis; statistics. (contributing to factors such as tourism); identify livelihoods connected to assets.

Social   Ability to work within budgetary-constrains and skills to acquire additional funding. Insurance coverage and investments implementation. Cost-benefits analysis; statistics.

Environmental   Engagement of stakeholders and suppliers. Citizen science; remote sensing; digital technologies;

Cultural   Understanding of tools for accessing information. Knowledge of arts, history, architecture and urban planning. Prioritization based on cultural value (non-monetary value) securing of culturally relevant documentation and heritage assets.

E) *Measure, control and monitor*

Physical Remote sensing; digital skills; citizen science; digital technologies; ability to document and subsequently transform experiences into prevention and mitigation measures. Monitor over short to medium term for evaluating prevention and mitigation measures. Understanding of maintenance costs. Capacity to create self-funding opportunities.

Economic Capability of budget drafting. Understanding of KPIs assessment. Statistics; economic loss assessment.

Social Ability to deliver public surveys and disseminate relevant outcomes. Communication and media: use of social media for monitoring and evaluation of the effectiveness of implemented actions and effects on social fabrics; citizen science.

Environmental Understanding new emerging risks and possible interactions. Citizen science; remote sensing; digital technologies.

Cultural Ability of continuous reporting. Fruition of digital information. Arts; restoration; fundamentals of cultural heritage management.

- Secondly, the aspect of the responsibilities of the CH risk manager is analyzed. The results obtained are outlined below:

A) *Identify risks*

All dimensions: mapping of assets; identification of vulnerabilities; reporting and flagging threats to dimensions

Physical Cataloguing; coordination and supervision; human resources management; developing protocols.

Economic Analysis of the economical appraisal and of the investment supplies recognition. Definition of the risks to be transferred to an insurance company.

Social Assessment on inclusiveness and accessibility impact for citizens, staff, and stakeholders; developing protocols; coordination and

![CHARISMA - Cultural Heritage Academy for Risk Management]

Co-funded by the
Erasmus+ Programme
of the European Union

supervision; human resources management; value/impact of the heritage asset.

Environmental   Desk survey and research of solid scientific support. Analysis of regional and national risk maps and reports. Coordination and supervision; human resources management.

Cultural   Desk survey and research of solid scientific support. Analysis of regional and national risk maps and reports. Coordination and supervision; human resources management; developing protocols identification of heritage assets.

B) *Risk assess & analyze*

All dimensions: process field data concerning assets; identify and evaluate hazards; identify and evaluate economic vulnerabilities (susceptibility, exposure and resilience); define economic risk

Physical   Performing diagnostic tests and measurements. Data analysis. Prioritization of risks. Extent and probability of risk calculation. Coordination and supervision; comprehensive emergency planning.

Economic   Analysis of market trends, drivers, targets. Analysis of investment and procurement sources. KPIs identification. Coordination and supervision; financial management; budgeting;

Social   Delivery of public surveys. Analysis of satisfaction level. Coordination and supervision; collection of relevant data/information related to the cultural heritage, hazard characteristics and local context. Assessment of risks posed to community.

Environmental   Analysis of impact of risk scenarios for cultural heritage sites. Extent and probability of risk calculation. Prioritization of risks. Coordination and supervision quantifying components of the risks Identification of key landscape features and or urban features.

Cultural   Archival and historical research. Calculation of probability and extent of the risk of loss of information coordination and supervision; assessment of significance and prioritization Catalogue and store data concerning cultural assets.

C H A R I S M A
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

C) *Plan action*

All dimensions: prioritize physical risks; design appropriate physical measures; evaluate physical measures (SWOT and budget); report evaluation to decision making level

Physical
Development of emergency plan; building and structures maintenance. Coordination and supervision; developing disaster scenarios, provide regular training and exercise.

Economic
Prioritization of valuable assets. Budget strategic planning, project making. Prioritization of investments. Coordination and supervision; strategic planning; financial management; participative governance; insurance planning.

Social
Scheduling frequent meetings and tests. Identification of emergency teams. Desk and practical exercises with the emergency team. Coordination of the work group. Stakeholder's engagement. Coordination and supervision; advocating; networking; strategic planning.

Environmental
Identification of risk mitigation strategies. Development of emergency plans. Analysis of national and local policies and regulations. Coordination and supervision.

Cultural
Prioritization of cultural identity assets. Identification of possible access methodologies to information. Coordination and supervision; participative governance. Define priorities in order to enable the rescue of the most important items; formulate disaster risk management plans for cultural heritage.

D) *Implement action*

All dimensions: planning implementation of measure; coordination of implementation phase; execution of implementation phase; reporting of implementation phase

Physical
Securing movable and immovable cultural heritage. Implementation of conservation strategies for building structures and artworks. Ordinary and extraordinary maintenance of structures and implants. Coordination and supervision.

Economic
Insurance coverage implementation. Coordination and supervision; networking. Working within budgetary-constrains.

Social	Awareness raising, public engagement, communication, civil education. Stakeholder involvement (national/regional/local). Coordination and supervision; networking; participative governance.
Environmental	Development of standard operating procedures based on risk scenarios for cultural heritage sites. Sharing of good practices and lesson learnt. Implementation of national and local policies and regulations. Coordination and supervision; participative governance.
Cultural	Digitalization of assets. Coordination and supervision; networking; participative governance.

E) *Measure, control and monitor*

All dimensions: Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures

Physical	Technical innovation. Set-up of indicators to follow-up. Coordination and supervision. Document event and transform experiences into prevention and mitigations measures.
Economic	Set-up of KPIs. Continuous reporting. Budget drafting. KPIs assessment. Coordination and supervision. Objective assessment of loss (monetary value) and usage of budget.
Social	Meetings to collect updates. Analysis of satisfaction. Social impact assessment. Public surveys. Supervision on stakeholders and suppliers engagement. Coordination and supervision.
Environmental	Technical innovation. Set-up of indicators to follow-up. Continuous reporting. Coordination and supervision.
Cultural	Set-up of indicators to follow-up. Continuous reporting. Analysis of digital information fruition. Coordination and supervision.

The multidisciplinary and multidimensional nature of cultural heritage risk management is widely acknowledged. This is also apparent in the results obtained, where different perspectives to CH risk management are combined. In particular,

the defined skills and competences span over different branches of science, including engineering, architecture, social, environmental and climate sciences but also humanities such as arts and history as well as economics, management and law. Similarly, responsibilities may range between technical, managerial and operational ones including coordination, planning and decision-making.

No major differences are evidenced among the Countries analyzed. This is due to the overall methodological consistency and homogeneity in the scientific approach to cultural heritage protection, nowadays applied worldwide. Nevertheless, divergences may occur in regulations, law and codes imposing, in turn, different planning requirements and procedures as well as heterogeneous operational constraints that may affect the implementation phase of mitigation strategies. Other differences may be found in the socio-economic and cultural contexts of each Country, which possess specific and unique peculiarities.

Existing professional figures in the CH job market

The desk review of the professional figures already on the CH job market (see Annex B), provides further insights on the stakeholders active or that can be potentially engaged in risk management tasks.

The results from the desk review of existing professional figures active in the field of cultural heritage protection, organized according to the risk management tasks (Fig.1), are the following:

A) Identify risks

Museum staff (security, conservators, curators, facility employee); archivists; building site coordinator; scientific staff / operators of specialized equipment, restorers; art historian; engineer (geotechnical, structural, fire etc.), architect, conservator, field reporter, consultant.

EQF Level 5, 6,7,8

In this first task, the analysis highlights how medium to highly skilled stakeholders, with some experience in building pathologies and damaging processes, are mostly involved. Due to the possibility of extensive data gathering (e.g. in-situ investigation

program for seismic vulnerability assessment), also reporters with lower EQF level can be involved in this task.

B) Risk assess & analyze

Scientists; architects; conservation experts (restorers, conservators, diagnosticians, etc.); Building site coordinator; engineer, external experts (climate, natural disasters); art; conservator; insurer; civil protection/emergency teams; local/regional agencies for territorial management.	*EQF Level 6,7 and 8*

The risk evaluation task requires also highly skilled personnel. In particular, experts in hazard mapping, vulnerability assessment as well as those experienced in assessing assets' values (e.g. monetary from insurers or cultural from conservators) are involved. This task is a very technical one, as it requires the synergy of multiple specialized professionals in order to set the basis for an appropriate prioritization of resources.

C) Plan action: All stakeholders from managers to users. Technical and non-technical actors, authorities at different levels

Museum staff (direction, administration, facility employee, etc.); engineers; scientists; architects; building site coordinator, conservator, fire officer; fire prevention/protection officer, civil and environmental engineer; planning and regional development engineer/planner; property management professions; town planner, external experts, heritage institute; ministry of culture, community.	*EQF Level 1-8*

The review of professional figures involved in action planning evidences how this commonly witnesses a wider participation of stakeholders, at least in some of its phases. This derives from the need to engage technical and non-technical actors in

participatory design processes, in order to incorporate in the actions the needs from the multiple dimensions of risk management. For such reason the EQF level can range over the full scale from 1 to 8.

D) Implement action

Engineers; architects; technicians (plumbers, builders, electricians, carpenters); conservation experts (restorers, conservators, diagnosticians, etc.); authorities, rescue services, universities; museum staff; civil protection officer, building site coordinator; conservator; fire officer; town planner; emergency rescue personnel; program manager.

EQF Level 5, 6,7,8

The implementation of the actions intended for risk mitigation usually requires the involvement of medium to highly skilled professionals. This is due, among others, to safety requirements for example during emergency response to disasters, when only trained emergency and rescue teams can be deployed.

E) Measure, control and monitor

Managers (direction, administration, security, conservators, curators, facility employee); researchers; authorities (heritage institute); museum staff (direction, administration, security, conservators, curators, facility employee); scientists; stakeholders; town planner, archivists, Data processing/ cataloguing data; external Experts (if required not present at institution). program manager.

EQF Level 6,7,8

The final task of CH risk management involves a selected group of professionals mostly related to management, control authorities and experts for carrying out scientific measurements.

The desk review carried out by the CHARISMA project partnership investigates the existing professional figures active in the field of cultural heritage protection. It reveals, once again, the complexity and multi-layered characteristics of risk management. A number of important observations can be made:

i) technical professionals are involved to some extent in all tasks, more importantly in the definition of risks, in the design of actions and in monitoring its effectiveness;

ii) participatory processes are essential throughout the management cycle, however it becomes of paramount importance in strategies planning;

iii) professionals expertise may overlap as for example in the case of internal and external experts.

Although plurality usually benefits the effectiveness of the management process, conflicting positions may arise. Such scenarios should be closely monitored and, if deemed necessary, duly addressed by the CH risk manager in order to ensure a smooth running of the different tasks.

Surveyed required skills and competences

The results from the survey provides a comprehensive overview of the skills and competences necessary for risk management for cultural heritage. The complete dataset is available in Annex C.

C H A R I S M A
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

RESPONSES BY COUNTRY:
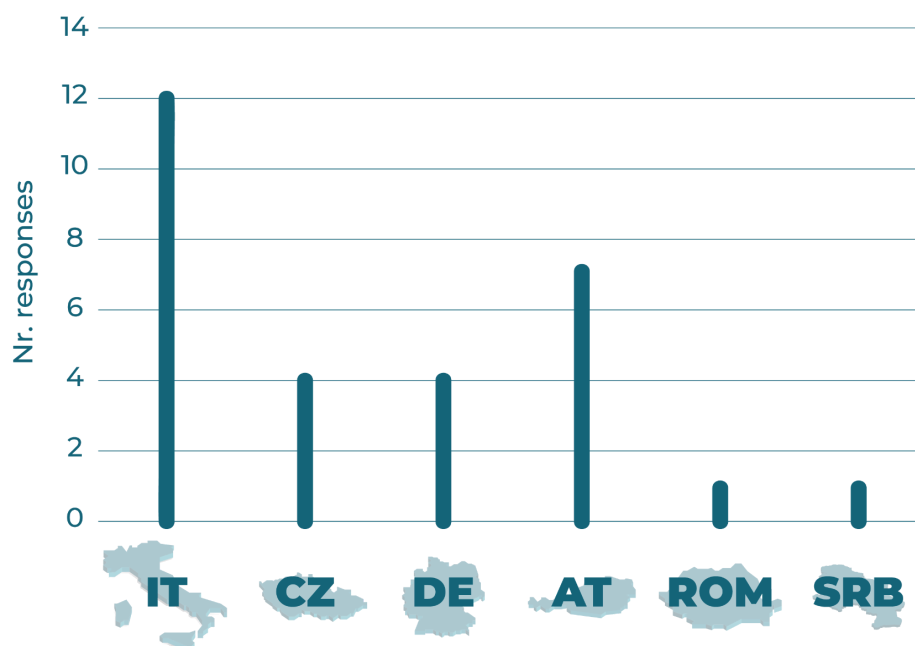
Fig.2 CHARISMA survey: responses by Country.

As shown in Fig.2, over thirty responses were collected from six different Countries (including Italy, Germany, Czech Republic, Austria, Romania and Serbia). Some respondents represent international organizations but they were counted as belonging to the Country where the respondent's local office is located. The cultural heritage categories managed by the respondents and represented in this survey include primarily movable and immovable tangible heritage (e.g. galleries and collections, monuments etc.) with respectively 55% and 31% while only 8% and 6% of the respondents deal with natural and underwater heritage (Fig.3). It is possible therefore to conclude that the most relevant categories of CH assets are represented in the results with a significant majority of participants involved with movable and immovable heritage (86%) over natural and underwater heritage assets (14%).
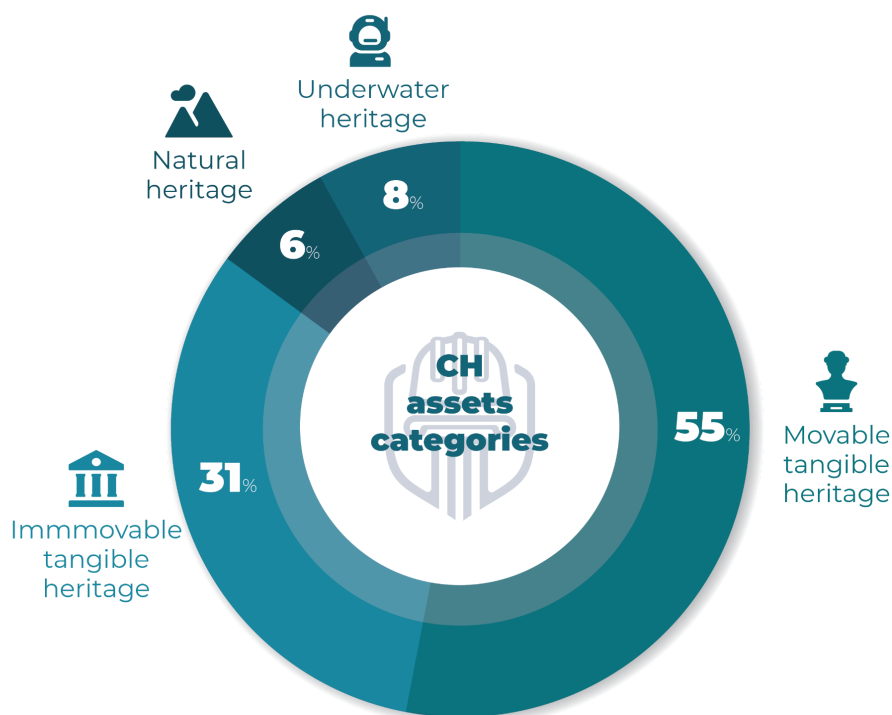
Fig.3 CH categories represented in the CHARISMA survey.

The percentage of CH management sectors (Fig.4) to which the respondents belong include, in descending order: emergency management, conservation and restoration (17%); preventive conservation (17%); research (16%); curatorship (15%); exhibition management (14%); communication and promotion/others (both 6%); transport, loans (5%) and finally the insurance sector (4%). Technical sectors account for about 65% of the participants to the survey and the remaining 35% represents service sectors related to the management of the asset. The slight unbalance towards the practitioners (e.g. conservator, engineer, architect, historian and scientist) is in line with the composition of the project partnership. Although this may produce some effects on the results, it provides in turn a robust set of knowledge-oriented data on which the profile for CH risk manager can be based.

CH MANAGEMENT
SECTORS:

6% Other

6% Communication & promotion

15% Curatorship

16% Research

14% Exhibition management

CH management sectors

4% Insurance

17% Preventive conservation

5% Transport, loans

17% Emergency management
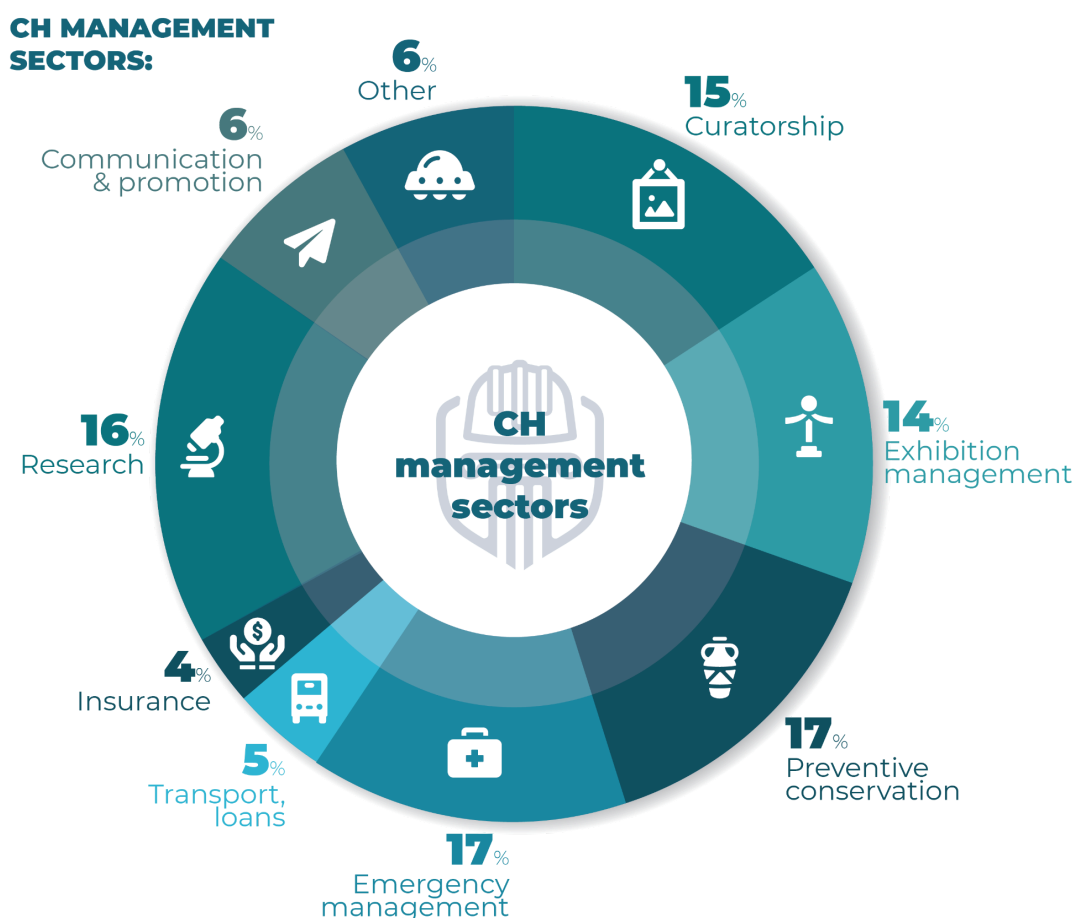
Fig.4 CH management sectors represented in the CHARISMA survey.

The results obtained for the required skills of the CH risk manager outline the most relevant abilities that, according to the respondents, this professional figure should have (Fig.5). Knowledge of vulnerability assessment methodologies and tools is indicated by 14% of the participants as a fundamental skill for risk management followed by the capacity to carry out impact assessment (11%), data mining activities (11%) and perform hazard projections (10%). These four skills, representing 46% of all responses, correspond to the fundamental conceptual pillars constituting the very meaning of risk evaluation, which couples the probability of the occurrence of an event with specific characteristics (hazard) with the expected damage (vulnerability and exposure).

REQUIRED SKILLS:

7% Dissemination

11% Data mining

9% Communication

6% Mapping of assets

11% Impact assessment

5% Inspection and survey of assets

9% Emergency services and rescuing

9% Cataloguing of assets

9% Technical design of measures

14% Vulnerability assessment

10% Hazard projections

Fig5. Required skills for the CH risk manager determined by the CHARISMA survey.

In particular, it should be underlined the role of data mining in the context of CH protection. Lack of information about the assets (e.g. monument's materials, geometry, conditions etc.) is the single greatest problem in cultural heritage protection, preventing a proper evaluation of risks and hence an adequate prioritization of resource investment. Other skills highlighted by the survey include cataloguing of assets and technical design of measures, emergency services and rescuing and communication (scoring 9% each); dissemination (7% of responses); mapping (6%) and inspection (5%).

Challenges and barriers

From a former review of challenges and barriers to cultural heritage protection carried out (ProteCht2save project DELIVERABLE D.T2.1.1, https://programme2014-20.interreg-central.eu/Content.Node/D.T2.1.1-Identification-of-barriers-and-challenges.pdf) the most relevant issues evidenced involve the following aspects:

a) lack of appropriate procedures related to the risk management such as decision support tools;

b) lack of data, as often no information about the cultural heritage assets and their location, condition and values are available;

c) lack of funds or limited accessibility to financial resources: limited funds for maintenance and protection are commonly reported with lack of funding from investors, low budgets of private owners and no resources for the rescue of cultural heritage; furthermore onerous and long procedures of application for financing and conservation works and low participation of public administration in co financing further exacerbate this issue;

d) lack of knowledge: low or no awareness of involved stakeholders is underlined as a challenge for implementing adequate risk prevention and mitigation strategies;

e) property status issues: in some cases the ownership of cultural heritage buildings is not regulated; properties owned jointly by the municipality and the state, for example, imposes additional financial burdens to the local authorities which are asked by the state for advanced funding schemes.

f) problems with regulations: rules regarding renovation of heritage buildings can be very strict creating an obstacle for risk management strategies. At the same time in some cases cultural heritage lacks a specific approach;

g) lack of coordination among stakeholders;

h) harshening of hazard levels: the changing extreme weather characteristics observed represent a serious problem for older buildings which may not be resilient to the new environmental conditions imposed;

i) low resilience awareness and lack of historic environment resilience supporting approach.

CHALLENGES:

Other **3**%

Obstacles in finding relevant information and documentation **9**%

Lack of training in risk management **17**%

Lack of suitable tools to carry out risk assessment procedures **14**%

Lack of funds for risk management **19**%

Lack of awareness of the risks and how to cope with them **19**%

Fig.6 Challenges and barriers for risk management, reported in CHARISMA survey.

It is interesting to notice that, very similarly, in the results of the CHARISMA survey (Fig.6) a series of obstacles are still felt by respondents as challenging the proper implementation of adequate risk management strategies. Lack of funds and awareness about CH risks are presented as the most relevant issues (19% of responses each). Lack of training is another fundamental barrier, attaining 17% of participants' responses. Lack of suitable tools to carry out risk assessment procedures (14%), obstacles in finding relevant information and documentation (9%) and other challenges are also reported as relevant. The findings outlined provide deeper insights on how the profile of the CH risk manager should be shaped and which issues it should address.

3.   Profile of the CH risk manager

Main skills, responsibilities and competences

The cultural heritage risk manager is essentially a professional figure who fosters the liaison between the different stakeholders involved in CH protection, ensuring proper communication and the smooth implementation of protection strategies. Risk managers orchestrate the actions of multiple professionals, coordinating their responsibilities and making sure the available skills and competences are fully exploited for the sake of a successful performance of the management task. The CH risk manager profile (Fig.7) features a set of three main skills that are at the basis and enable the performance of various responsibilities. In between skills and responsibilities, there are operational challenges that act as a barrier preventing the abilities to be implemented in practical actions. Such challenges, therefore, should be overcome and properly addressed in order to develop the full potential of the manager's skills.

Accordingly to the outcomes of the analysis and survey, the CH risk manager profile is characterized by three main overlaying skills:

i) understanding of risk evaluation procedures,

ii) awareness of cultural heritage vulnerabilities and

iii) communication and dissemination skills.

C H A R I S M A
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

CH RISK MANAGER PROFILE:

RESPONSIBILITIES
- Coordinate multidisciplinary
- Facilitate participation
- Foster liason among stakeholders

CHALLENGES
- Lack of funds
- Lack of awareness
- Lack of data
- Possible conflicts

SKILLS
- Understanding risk evaluation
- Awareness of CH vulnerabilities and protection
- Communication and dissemination

Fig.7 Cultural heritage risk manager profile

Based on such skill platform, the CH risk manager is assigned with a number of responsibilities. Firstly, the multidisciplinary and multidimensional nature of cultural heritage risk management imposes the necessity to individuate a person in charge of coordinating the management process and individual tasks. This responsibility is enabled by the above-mentioned skills i) and ii).

Secondly, the risk manager should facilitate participation, particularly in the design of preparedness, emergency and recovery measures, engaging both experts and lay users and ensuring the development of appropriate resilience building strategies at local level.

Thirdly, the CH risk manager is responsible for fostering the liaison among the stakeholders active in the risk management process. This responsibility derives from the communication and dissemination skills required for this professional figure.

Finally, challenges needed to be addressed by the implementation of tailored measures include lack of funds, lack of awareness and data and the creation of possible conflicts within the management team.

Benefits and impact of the CH risk manager

The CH risk manager is a very much-required professional figure in the job market which overviews the overall implementation of the management process. In particular, such manager develops plans to minimize and mitigate negative outcomes through a combination of project management and proposal development. Having a specific risk manager for cultural heritage would imply a series of immediate benefits. First, it would ensure the development of risk management plans specifically tailored to the cultural heritage protection requirements and therefore it would endorse compatible solutions for its safeguard. Secondly, it would help discerning roles among the stakeholders and channel the communication flow toward the correct personnel units.

The creation of the CH risk manager profile is designed to specifically fulfill the needs of Vocational Education and Training (VET) providers for adapting their curriculum related to different kinds of cultural heritage professionals, providing to trainees the necessary levels of skills and competences required by the job market. This attempts to overcome the shortcomings related to training courses for CH risk management which are either too exclusive, for example Summer Schools or training events targeted at high-level decision makers or professionals or they are too sector-specific such as training events targeted at CH owners' and managers' staff, with a very narrow vision of the problem, mostly focused on fire damage prevention, reaction in times of natural disasters. The profile mapping provided in this report may be highly innovative, as at the moment there is no evidence of any other training company or VET provider all across Europe implementing a curriculum specifically designed to create this professional figure. Once the CH risk manager profile is properly disseminated, it would be possible that other stakeholders outside the project partnership will implement it into their own modules or courses, or integrate the skills and competences underlined in their VET courses. In addition, the profile is highly transferable to other VET providers, and to other similarly fields of VET training involving management of risks caused by climate change (urban planning, construction, landscaping, etc.).

4.   ANNEX A- Report activity 2.1

Analysis of the skills and competences balance needed to perform different tasks related to risk management of CH in Europe, with particular focus on target Countries

4.1.   Introduction

Risk management process

Implementing a risk management process is vital for any organization. Good risk management does not have to be resource intensive or difficult for organizations to undertake or insurance brokers to provide to their clients. With a little formalization, structure, and a strong understanding of the organization, the risk management process can be rewarding.

Risk management does require some investment of time and money but it does not need to be substantial to be effective. In fact, it will be more likely to be employed and maintained if it is implemented gradually over time.

The key is to have a basic understanding of the process and to move towards its implementation.

4.2. MAZZINI Lab - ITALY

Skills and competences analysis

	SKILLS & COMPETENCES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Properties of heritage materials and artistic techniques. Deterioration processes on buildings and collections.	Understanding of economic value, art and antiques market dynamics, and investment supplies. Identification of the risks to be transferred to the insurance company.	Awareness of inclusiveness and accessibility needs for citizens, staff, and stakeholders.	Understanding of hydro-geological dynamics and natural hazards. Climate change impact scenarios.	Awareness of traditions and conventions of local communities, and cultural and artistic expressions. Understanding of sources of possible loss of information.
B) Risk assess & analyze	Diagnostic techniques. Data mining.	Understanding of KPIs, market trends, and drivers. Awareness of	Ability to draft public surveys and analyze the resulting level of satisfaction.	Competencies in risk mapping. Data mining.	Archival-historical competencies.

	Prioritization of risks.	investment and procurement sources.		Prioritization of risks. Life cycle assessment.	
C) Plan action	Risk disaster preparedness. Risk mitigation measures. Policy and regulation for heritage conservation. Prioritization of fragile assets	Understanding of budget plans and investment priorities. Awareness of insurance coverage, policy and regulation for investments. Fundraising competences.	Ability to identify engagement strategies for relevant stakeholders.	Awareness of interoperability among different stakeholders. National and regional policies and regulation.	Ability to assess priorities of cultural identity assets and to identify possible access methodologies to information.
D) Implement action	Conservation strategies for building structures and artworks. Ordinary and extraordinary maintenance of structures and implants.	Insurance coverage and investments implementation.	Coordination, cooperation, and networking skills. Understanding of human resources management and legal aspects.	Implementation of risk mitigation strategies. Engagement of stakeholders and suppliers.	Digital technologies skills. Understanding of tools for accessing information.

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

E) Measure, control and monitor	Understanding of diagnostic techniques. Data mining. Update on existing technologies.	Capability of budget drafting. Understanding of KPIs assessment.	Ability to deliver public surveys and disseminate relevant outcomes.	Understanding of new emerging risks and possible interactions.	Ability of continuous reporting. Fruition of digital information.

Responsibilities analysis

	RESPONSABILITIES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Assessment on heritage materials properties. Diagnostics of deterioration	Analysis of the economical appraisal and of the investment supplies recognition. Definition of the risks to be	Assessment on inclusiveness and accessibility impact for citizens, staff, and stakeholders.	Desk survey and research of solid scientific support. Analysis of regional and national risk maps and reports.	Desk survey and research of solid scientific support.

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	processes on buildings and collections.	transferred to an insurance company.			Analysis of regional and national risk maps and reports.
B) Risk assess & analyze	Performing diagnostic tests and measurements. Data analysis. Prioritization of risks. Extent and probability of risk calculation.	Analysis of market trends, drivers, targets. Analysis of investment and procurement sources. KPIs identification. Analysis of the possible economic value of the insurance coverage.	Delivery of public surveys. Analysis of satisfaction level.	Analysis of impact of risk scenarios for cultural heritage sites. Extent and probability of risk calculation. Prioritization of risks.	Archival and historical research. Calculation of probability and extent of the risk of loss of information.
C) Plan action	Development of Emergency Plans (conservation strategies for building structures and artworks). Plan building	Prioritization of valuable assets. Budget strategic planning, project making. Prioritization of investments.	Scheduling frequent meetings and tests. Identification of emergency teams. Desk and practical exercises with the emergency team. Coordination of the work group.	Identification of risk mitigation strategies. Development of Emergency Plans (disaster preparedness and emergency management). Analysis of national and	Prioritization of cultural identity assets. Identification of possible access methodologies to information.

			Stakeholder's engagement.	local policies and regulations.	
	and structures maintenance activities. Identification and prioritization of risk mitigation strategies.				
D) Implement action	Securing movable and immovable Cultural Heritage. Implementation of conservation strategies for building structures and artworks. Ordinary and extraordinary maintenance of structures and implants.	Insurance coverage implementation.	Awareness raising, public engagement, communication, civil education. Stakeholder involvement (national/regional/local).	Development of Standard Operating Procedures based on risk scenarios for cultural heritage sites. Sharing of good practices and lesson learnt. Implementation of national and local policies and regulations.	Digitalization of assets.

| E) Measure, control and monitor | Technical innovation. Set-up of indicators to follow-up. | Set-up of KPIs. Continuous reporting. Budget drafting. KPIs assessment. | Meetings to collect updates. Analysis of satisfaction. Social impact assessment. Public surveys. Supervision on stakeholders and suppliers engagement. | Technical innovation. Set-up of indicators to follow-up. Continuous reporting. | Set-up of indicators to follow-up. Continuous reporting. Analysis of digital information fruition. |

4.3. WARREDOC-ITALY

Skills and competences analysis

	SKILLS & COMPETENCES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Knowledge of materials, restoration techniques and tools basic knowledge of risk management (main concepts, categories of risks to cultural heritage and their impacts); knowledge of agents of deterioration and loss of cultural	cost-benefits analysis; statistics; urban and regional planning; management; knowledge of local context related to economic and financial issues	qualitative analysis; cultural heritage laws and regulations; human and economic geography; anthropology; sociology; anthropological risks, international standards on risk management (ISO 31000:2009, Risk Management - Principles and guidelines);	Knowledge of natural disasters; general botany; fundamentals of biology; environmental risks; Knowledge of pathogen agents and degradation factors ; biological and chemical agents; climate change effects, climate extremes and climate related risks; knowledge of local context related to environment and related data; geographical context	Arts; History (urban history), architecture; urban planning; knowledge of local context related to cultural norms and traditions; Types of Cultural Heritage; Archeology; archival science; value of heritage assets; understanding of historic value and significance of a CH asset

	assets, their sources and effects on heritage assets; types of risks occurrence; impact of disasters on cultural heritage and the basic relationships between hazards, vulnerabilities and disaster risks		knowledge of actors and stakeholders; legal, political, administrative and operational aspects; social impact of disasters		
B) Risk assess & analyze	GIS; digital skills; Copernicus, basic knowledge of risk management (prioritizing and evaluation of risks) ; vulnerability assessment, skills related to analysis of the risks' chance of occurrence and the expected impact, ex-ante	GIS; digital skills evaluation of economic value of cultural heritage assets; analysis and estimation of the loss of economic value in case of damages caused by disasters; cultural heritage value for economic issues and local development	GIS; digital skills; local knowledge regarding heritage and risk management (memory of residents, observations on damages); social statistics;	GIS; digital skills; regional statistics about the frequency and intensity of extreme events (GIS, climate tables, other governmental o private data); disaster risks analysis: ex ante and ex post; seismic characteristics	GIS; digital skills; information management related to the heritage assets (by keeping an updated inventory and backup copies); prioritizing cultural assets to protect; expected loss of non-economic value; understanding of values

	and ex-post analysis; basic technical knowledge on impact of agents of deterioration ; disaster risk management cycle; methodology and tools for risk assessment				and significance of different types of CH
C) Plan action	Cataloging and evaluation of objects; decision making skills; urban planning; science and technologies for cultural heritage conservation and restoration;	cost-benefits analysis; statistics; urban and regional planning; Management resource planning, decision making skills; fundings, investments, insurance; digital competences;	laws and regulations; sociology; anthropology; stakeholders analysis; communication and media; emergency Preparedness and Response Procedures: risk prevention and mitigation; formulation of	Knowledge of natural disasters; general botany; fundamentals of biology; environmental risks; urban planning	Arts; History (urban history), architecture; urban planning; knowledge of history and background of cultural heritage assets

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

			Disaster Risk Management Plan; best practices and case studies; international and local policies on cultural heritage and disaster risk management; institutional framework and methods for post disaster recovery and rehabilitation of cultural heritage at international/nation al /regional levels		
D) Implement action	laws and regulations; Knowledge of materials, restoration techniques and tools decision making skills; evacuation and	cost-benefits analysis; statistics decision making skills;	anthropology; sociology; qualitative/quantita tive analysis; participative approaches (citizen science); communication and media;	citizen science; remote sensing; digital technologies;	Arts; History (urban history), architecture; urban planning

	recovery measures for CH in emergency situations, related best practices		communication on risks and behavior;		
E) Measure, control and monitor	remote sensing; digital skills; citizen science; digital technologies; fundamentals of disaster risk management; damage assessment; repair and restoration techniques	statistics; economic loss assessment	communication and media; citizen science	citizen science; remote sensing; digital technologies	Arts; restoration; fundamentals of cultural heritage management

Responsibilities analysis

	RESPONSABILITIES

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	coordination and supervision; human resources management; developing protocols Timely restoration and protection tools for tangible cultural heritage; respect of conservation rules	coordination and supervision; developing protocols understanding the local economic context and economic situation, identification of economic barriers	coordination and supervision; human resources management; developing protocols identification of internal and external relevant stakeholders and actors; understanding local law	coordination and supervision; human resources management; developing protocols	coordination and supervision; human resources management; developing protocols identification of heritage assets
B) Risk assess & analyze	coordination and supervision; collection of relevant data/information related to the cultural heritage,	coordination and supervision; financial management; budgeting;	coordination and supervision; collection of relevant data/information related to the cultural heritage, hazard	coordination and supervision quantifying components of the risks	coordination and supervision; Undertake integrated disaster risk assessment and build systems for disaster risk

	hazard characteristics and local context		characteristics and local context		management of cultural heritage
C) Plan action	coordination and supervision; developing disaster scenarios for the heritage site and evaluating risks; emergency preparedness and response procedures	coordination and supervision; strategic planning; financial management; participative governance; insurance planning	coordination and supervision; advocating; networking; strategic planning ; integration of cultural heritage needs into disaster risk management and sustainable development policies; development of disaster risk management plans for various types of cultural heritage sites	coordination and supervision	coordination and supervision; participative governance Define priorities in order to enable the rescue of the most important items; formulate disaster risk management plans for cultural heritage;
D) Implement action	coordination and supervision Adoption of evacuation and recovery measures for CH	coordination and supervision; networking	coordination and supervision; networking; participative governance; implementation of disaster risk	coordination and supervision; participative governance	coordination and supervision; networking; participative governance

		management plans for various types of cultural heritage sites		
E) Measure, control and monitor	coordination and supervision	coordination and supervision	coordination and supervision	coordination and supervision	coordination and supervision

4.4. UWK-AUSTRIA

Skills and competences analysis

	SKILLS & COMPETENCES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Data-Collection: Cataloguing of heritage assets, critical supporting infrastructure, skills	Data-Collection/Analysis: Influence of the market on the heritage asset as well as for its maintenance.	Understanding the value/impact of the heritage asset to the people and the need to engage /interact with (see) the asset itself	Awareness of the immediate potential of and vulnerability towards regional and global natural hazards as well as factors	Understanding the value/impact of the heritage asset to the traditions and identity of

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

				pushing deterioration (incl. Neglect)	a population (e.g. ritual purposes)
	to maintain or restore the heritage assets required	Monetary and intangible cultural value of the asset (contributing to factors such as tourism).			
B) Risk assess & analyze	Knowledge and ability of performing vulnerability analysis and risk assessment taking into account the specific environment of the heritage asset	Ability to perform economic and monetary evaluation of heritage asset taking into account the added value generated for the region (e.g. tourism).	Assessment of risks posed to community harboring the heritage asset if damaged/lost. Identification of local key players (stakeholders). Shared impact analysis with local community in case of destruction/loss of heritage asset	Identification of key landscape features and or urban features driving or alleviating risk factors (e.g. location of heritage asset close to a body of water prone for flooding)	Assessment of significance and prioritization based on non-monetary value of heritage asset
C) Plan action	Comprehensive Emergency Planning with strong Focus on Prevention and Mitigation measures, Regular Trainings and	Budgetary requirements aka cost-management skills. Cost-benefit analysis of planned action and prioritization of monetary funds	Stakeholder/Talent-Management: Involvement of key players (stakeholders) in the planning phase and continuous briefing. Communication of planned action with	Environmental factors contributing to the risk of heritage asset (e.g. historic flood events, fire hazards, flash flood events, occurrence of storms, unique geographic situation benefitting or	Historic documentation of heritage asset (e.g. architectural plan of building, building material, method of construction/creation etc.) and skills required for rebuilding.

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Exercises for responsible personnel, Emergency Equipment and Material, Safe Storage Sites /Refuges, Cooperation with Emergency Responders.		local community (e.g. using scenarios and case studies for visualization). Involvement of local population (citizens science) in obtaining additional (sometimes anecdotal) information on heritage asset incl. possible verification of gathered information. Availability of skilled personnel (with specific knowledge) for rebuilding/maintaining heritage asset in case of damage or loss (e.g. maintenance/rebuilding of historic dry stone walls)	endangering the heritage asset) and documented damages for planning.	Determination of cultural impact in case of loss/destruction/damage.
D) Implement action	The ability to keep an essential overview and to transform a chaotic situation into an	Ability to work within budgetary-constrains and skills to acquire additional	Stakeholder Management: involvement of local stakeholders and (public) in rescue	On the sport adaptation towards environmental circumstances (e.g. heavy rain leading to	Prioritization based on cultural value (non-monetary value) securing of culturally relevant documentation

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	organized reaction, prioritizing and then implementing: (if applicable) Prior Regular Trainings and Exercises for responsible personnel, usage of Emergency Equipment and Material, usage of Safe Storage Sites/Refuges, on the spot Cooperation with Emergency Responders	funding (if possible). Ability to work in a sustainable and diligent manner regarding cultural heritage assets focusing on monetary issues	mission and/or citizens science in obtaining additional information/skills on heritage asset (also when lost) in case of rebuilding/recreation.	flash floods after prolonged drought)	and heritage assets. Ability to work in a sustainable and diligent manner regarding cultural heritage assets.
E) Measure, control and monitor	The ability to document and subsequently transform experiences into prevention and	Objective assessment of loss (monetary value) and usage of budget. Additional monetary benefit of rebuilding/reconstr	Usage of momentum given by the disaster to rally key stakeholders (incl. local population) for future measures (or recreation/rebuilding efforts) and to foster awareness. Communication of	Analysis of environmental factors involved in disaster. Cross-Check with historic events and analysis of possible changes due to climate change	Objective assessment of loss (cultural aspect) and benefit of rebuilding/reconstruction (if applicable: impact on local identity)

![CHARISMA - Cultural Heritage Academy for Risk Management]

Co-funded by the
Erasmus+ Programme
of the European Union

mitigation measures	uction (incl. local economy)	event to various forms of media.		

Responsibilities analysis

	RESPONSABILITIES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Data-Collection: Cataloguing of heritage assets, critical supporting infrastructure, and identification of	Analysis of the market impacting and being impacted by the heritage asset as well as for its maintenance as well as the monetary and intangible cultural value of the asset	Value/impact of the heritage asset to the local population and the need to engage /interact with (e.g. see) the asset itself	Assessment of the immediate potential of and vulnerability towards regional and global natural hazards as well as factors pushing deterioration (incl. Neglect)	Assessment of value/impact of the heritage asset to the traditions and identity of a population (e.g. ritual purposes)

	skills (arts & crafts) to maintain or restore the heritage assets.	(contributing to factors such as tourism).			
B) Risk assess & analyze	Comprehensive Emergency Planning with strong Focus on Prevention and Mitigation measures, Regular Trainings and Exercises for responsible personnel, Emergency Equipment and Material, Safe Storage Sites /Refuges, Cooperation with	Economic and monetary evaluation of heritage asset taking into account the added value generated for the region (e.g. tourism).	Assessment of risks posed to community harboring the heritage asset if damaged/lost. Identification of local key players (stakeholders). Shared impact analysis with local community in case of destruction/loss of heritage asset	Identification of key landscape features and or urban features driving or alleviating risk factors (e.g. location of heritage asset close to a body of water prone for flooding)	Assessment of significance and prioritization based on non-monetary value of heritage asset

	Emergency Responders.				
C) Plan action	Use Experiences and Lessons Learned from others organize: Regular Trainings and Exercises for responsible personnel, usage of Emergency Equipment and Material, usage of Safe Storage Sites/Refuges, on the spot Cooperation with Emergency Responders	Establishment of budgetary requirements and cost-management. Cost-benefit analysis of planned action and prioritization of monetary funds	Stakeholder/Talent-Management: Involvement of key players (stakeholders) in the planning phase and continuous briefing. Communication of planned action with local community (e.g. using scenarios and case studies for visualization). Involvement of local population (citizens science) in obtaining additional (sometimes anecdotal) information on heritage asset incl. possible verification of gathered information. Availability of skilled personnel (with specific knowledge) for	Assessment of environmental factors contributing to the risk of heritage asset (e.g. historic flood events, fire hazards, flash flood events, occurrence of storms, unique geographic situation benefitting or endangering the heritage asset) and documented damages for planning.	Gathering & Evaluation of historic documentation of heritage asset (e.g. architectural plan of building, building material, method of construction/creation etc.) and skills required for rebuilding. Determination of cultural impact in case of loss/destruction/damage .

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

			rebuilding/maintaining heritage asset in case of damage or loss (e.g. maintenance/rebuilding of historic dry stone walls)		
D) Implement action	Essential Overview, Transforming a chaotic situation into an organized reaction, Prioritization, Cooperation with and support of emergency responders, Implementing set Plan or (if applicable) commence exerise.	Working within budgetary-constrains and acquisition of additional funding (if possible). Working in a sustainable and diligent manner regarding cultural heritage assets focusing on monetary issues	Stakeholder Management: involvement of local stakeholders and (public) in rescue mission and/or citizens science in obtaining additional information/skills on heritage asset (also when lost) in case of rebuilding/recreation.	On the sport adaptation towards environmental circumstances (e.g. heavy rain leading to flash floods after prolonged drought)	Prioritization based on cultural value (non-monetary value) securing of culturally relevant documentation and heritage assets. Ability to work in a sustainable and diligent manner regarding cultural heritage assets.

E) Measure, control and monitor	Document event and transform experiences into prevention and mitigations measures	Objective assessment of loss (monetary value) and usage of budget. (If applicable) additional monetary benefit of rebuilding/reconstruction (incl. local economy)	Usage of momentum given by the disaster to rally key stakeholders (incl. local population) for future measures (or recreation/rebuilding efforts) and to foster awareness. Communication of event to various forms of media.	Analysis of Environmental factors involved in disaster. Cross-Check with historic events and analysis of possible changes due to climate change	Objective assessment of loss (cultural aspect) and benefit of rebuilding/reconstruction (if applicable: impact on local identity)

4.5.   ARTE GENERALI-GERMANY

Skills and competences analysis

	SKILLS & COMPETENCES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

A) Identify risks	Facilities Technological Facilities Security (Physical and Electronic) People Safety Fire Protection Systems	Cataloging and Evaluation of Objects Economic/Financial Skills Statistics Basic digital competence Principles of decision making theory	Legal and Compliance. Sociology Social policy systems Communication and Media Crisis Management	Geophysics Environmental and climatic sciences	Art and History Culture and Art market dynamics
B) Risk assess & analyze	Facilities Technological Facilities Security (Physical and Electronic) People Safety Fire Protection Systems	Cataloging and Evaluation of Objects Economic/Financial Skills Statistics Basic digital competence Principles of decision making theory	Legal and Compliance. Sociology Social policy systems Communication and Media Crisis Management		
C) Plan action	Facilities Technological Facilities Security (Physical and	Cataloging and Evaluation of Objects Economic/Financial Skills Statistics Basic digital	Legal and Compliance. Sociology Social policy systems Communication and		

	Electronic) People Safety Fire Protection Systems	competence Principles of decision making theory	Media Crisis Management		
D) Implement action	Facilities Technological Facilities Security (Physical and Electronic) People Safety Fire Protection Systems	Cataloging and Evaluation of Objects Economic/Financial Skills Statistics Basic digital competence Principles of decision making theory	Legal and Compliance. Sociology Social policy systems Communication and Media Crisis Management		
E) Measure, control and monitor	Facilities Technological Facilities Security (Physical and Electronic) People Safety Fire Protection Systems	Cataloging and Evaluation of Objects Economic/Financial Skills Statistics Basic digital competence Principles of decision making theory	Legal and Compliance. Sociology Social policy systems Communication and Media Crisis Management		

4.6.   ITAM-CZECH REPUBLIC

Skills and competences analysis

	SKILLS & COMPETENCES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Data gathering skills: Mapping assets Surveying conditions Inspecting damage	Data gathering skills: Individuate economic values for exposed assets Determine management and maintenance costs. Livelihoods connected to assets.	Data gathering skills: Survey of social values at risk Mapping of social conditions Individuation of fragile population	Data gathering skills: Survey of ecosystems with analysis of weaknesses and strengths that can be used in the planning phase.	Data gathering skills: Linked to physical and social dimension Map and survey cultural values at risk

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Data processing: Cataloguing Information systems				
B) Risk assess & analyze	Evaluating vulnerability including assessing the resilience and the exposure of assets under threat. Determination of hazards	-Projections of economic loss in disaster scenarios	Social impact analysis Prioritization Intangible values exposed	Projections of environmental impact of disasters Prioritization of environmental threats	Define cultural relevance Cultural impact assessment: loss of sense of belonging, identity.

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

C) Plan action	Preventive measures: Design of technical measures that reduce vulnerability or increase resilience	Cost-benefit analysis of planned actions for different phases of risk management (e.g. preventive and preparedness, emergency and recovery).	Stakeholders involvement	Environment specialist should define technical measures to be implemented for prevention, emergency and recovery.	Plan preventive, emergency and recovery actions
			Participatory processes		Involve stakeholders and communities.
	Preparedness:	Prioritization of funds	Community involvement in action design		
	Training		Communication of planned action with local community		
	Emergency:				
	Rescue units				
	Coordination of activities				
	Recovery:				
	This applies to all dimensions of risk.				
	Planning skills necessary include:				

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Management of resources Cooperation among stakeholders Communication skills				
D) Implement action	Technical skills for measures implementation Emergency team coordination	Cost management: skills to work within available budget	Involvement of community in implementation of measures Technical guidance Training for emergency scenarios Social resilience building skills	Technical guidance for natural assets e.g. park and gardens specialists Communicate among stakeholders	Technical guidance Communication
E) Measure, control and monitor	Monitor over short to medium term for evaluating	Monitoring of costs Estimate of economic impact of	Use of social media for monitoring and evaluation of the effectiveness of implemented actions	Evaluate environmental impact of implemented actions monitoring the effects on environmental factors	Monitoring impact of action on cultural dimension

	prevention and mitigation measures Determine possible shortcomings that can be adjusted	actions (benefits or losses) Determination of maintenance costs Creation of self-funding opportunities	and effects on social fabrics.		

Responsibilities analysis

	RESPONSABILITIES				
	Physical dimension	Economic dimension	Social dimension	Environmental dimension	Cultural dimension
A) Identify risks	Mapping of physical assets Identification of physical vulnerabilities	Mapping of economic assets at risk Identification of economic vulnerabilities	Mapping of social assets at risk Identification of social vulnerabilities	Mapping of social assets at risk Identification of social vulnerabilities	Mapping of social assets at risk Identification of social vulnerabilities

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Reporting and flagging threats to physical dimension	Reporting and flagging threats to economic dimension	Reporting and flagging threats to social dimension	Reporting and flagging threats to environmental dimension	Reporting and flagging threats to cultural dimension
B) Risk assess & analyze	Catalogue and store data concerning physical assets Process field data concerning physical assets Identify and evaluate hazards Identify and evaluate physical vulnerabilities (susceptibility, exposure and resilience) Define physical risk	Catalogue and store data concerning economic assets Process field data concerning economic assets Identify and evaluate hazards Identify and evaluate economic vulnerabilities (susceptibility, exposure and resilience) Define economic risk	Catalogue and store data concerning social assets Process field data concerning physical assets Identify and evaluate hazards Identify and evaluate social vulnerabilities (susceptibility, exposure and resilience) Define social risk	Catalogue and store data concerning environmental assets Process field data concerning environmental assets Identify and evaluate hazards Identify and evaluate environmental vulnerabilities (susceptibility, exposure and resilience) Define environmental risk	Catalogue and store data concerning cultural assets Process field data concerning cultural assets Identify and evaluate hazards Identify and evaluate cultural vulnerabilities (susceptibility, exposure and resilience) Define cultural risk

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

C) Plan action	Prioritize physical risks Design appropriate physical measures Evaluate physical measures (SWOT and budget) Report evaluation to decision making level	Prioritize physical risks Design appropriate physical measures Evaluate physical measures (SWOT and budget) Report evaluation to decision making level	Prioritize physical risks Design appropriate physical measures Evaluate physical measures (SWOT and budget) Report evaluation to decision making level	Prioritize physical risks Design appropriate physical measures Evaluate physical measures (SWOT and budget) Report evaluation to decision making level	Prioritize physical risks Design appropriate physical measures Evaluate physical measures (SWOT and budget) Report evaluation to decision making level
D) Implement action	Planning implementation of measure Coordination of implementation phase Execution of implementation phase	Planning implementation of measure Coordination of implementation phase Execution of implementation phase	Planning implementation of measure Coordination of implementation phase Execution of implementation phase Reporting of implementation phase	Planning implementation of measure Coordination of implementation phase Execution of implementation phase Reporting of implementation phase	Planning implementation of measure Coordination of implementation phase Execution of implementation phase Reporting of implementation phase

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	Reporting of implementation phase	Reporting of implementation phase			
E) Measure, control and monitor	Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures	Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures	Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures.	Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures	Monitoring of the performance of implemented measures Evaluation of implemented measures Reporting of optimization potential for implemented measures Control and adjustment of implemented measures Execution of adjustments to implemented measures

5. ANNEX B- Report activity 2.2

Desk review of the professional figures already on the job market for each task, and comparison with the EQF framework

5.1. Introduction

EQF framework

Each of the eight levels of the EQF is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any qualifications system (https://europa.eu/europass/en/description-eight-eqf-levels). The learning outcomes are defined in terms of:

- **Knowledge**: in the context of EQF, knowledge is described as theoretical and/or factual.

- **Skills**: in the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

- **Responsibility and autonomy**: In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility.

— Level 1 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context

— Level 2 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy

— Level 3 - learning outcome

Knowledge	Skills	Responsibility and autonomy
Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems

— Level 4 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities

— Level 5 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

— Level 6 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups

— Level 7 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research

Critical awareness of knowledge issues in a field and at the interface between different fields | Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields | Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams |

— Level 8 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Compatibility with the Framework for Qualifications of the European Higher Education Area

The Framework for Qualifications of the European Higher Education Area provides descriptors for three cycles agreed by the ministers responsible for higher education at their meeting in Bergen in May 2005 in the framework of the Bologna process. Each cycle descriptor offers a generic statement of typical expectations of achievements and abilities associated with qualifications that represent the end of that cycle.

1. The descriptor for the short cycle developed by the Joint Quality Initiative as part of the Bologna process, (within or linked to the first cycle), corresponds to the learning outcomes for EQF level 5.

2. The descriptor for the first cycle corresponds to the learning outcomes for EQF level 6.

3. The descriptor for the second cycle corresponds to the learning outcomes for EQF level 7.

4. The descriptor for the third cycle corresponds to the learning outcomes for EQF level 8

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

5.2. MAZZINI Lab-ITALY

Professional figures available in the job market for each CH management task (see report 2.1)

	Profession	EQF level
A) Identify risks	museum staff (security, conservators, curators, facility employee); underwriter;	Level 4, Level 5
B) Risk assess & analyze	maintenance engineers; scientists; architects; underwriter; conservation experts (restorers, conservators, diagnosticians, etc.);	Level 5, Level 6, Level 7
C) Plan action	museum staff (direction, administration, facility employee, etc.); engineers; scientists; architects; underwriter;	Level 5, Level 6, Level 7, Level 8
D) Implement action	museum staff; maintenance engineers; architects; technicians (plumbers, builders, electricians); conservation experts (restorers, conservators, diagnosticians, etc.);	Level 3, Level 4, Level 5, Level 6
E) Measure, control and monitor	museum staff (direction, administration, security, conservators, curators, facility employee); scientists; underwriter; stakeholders	Level 4, Level 5, Level 6

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

5.3. WARREDOC-ITALY

Professional figures available in the job market for each CH management task (see report 2.1)

	Profession	EQF level
A) Identify risks	archivists, Building site coordinator, Geographical engineer, Geotechnical engineer, Manager, Management consultant, Museum director/Curator, Planning and regional development engineer/physical planner, Property management professions, Town planner, Data processing/ cataloguing data	Levels 3-8
B) Risk assess & analyze	Building site coordinator, Geographical engineer, Geotechnical engineer, Management consultant, Manager, Museum director/Curator, Planning and regional development engineer/physical planner, Property management professions, Town planner, Civil and environmental engineer, Building engineer, Information systems engineer	Levels 3-8
C) Plan action	architects, engineers, Building engineer, Civil and environmental engineer, Building site coordinator, Conservator, Fire officer, Fire prevention/protection officer, Civil and environmental engineer, Geographical engineer, Management consultant, Manager, Museum director/Curator, Planning and regional development engineer/physical planner, Property management professions, Town planner, Accountant	Levels 3-8

D) Implement action	Civil Protection officer, Building engineer, Building site coordinator, Conservator, Fire officer, Fire prevention/protection officer, Manager, Museum Worker, Museum director/Curator, Property management professions, Town planner, Emergency rescue personnel	Levels 3-7
E) Measure, control and monitor	Building site coordinator, Fire officer, Geographical engineer, Building engineer, Management consultant, Manager, Museum director/Curator, Planning and regional development, engineer/physical planner, Property management professions, Town planner, archivists, Data processing/cataloguing data	Levels 3-7

5.4. UWK-AUSTRIA

Professional figures available in the job market for each CH management task (see report 2.1)

	Profession	EQF level
A) Identify risks	Institutional Staff in general: Janitor/Head of Building & Security, Specialized Crafts incl. Carpenters & Electricians, Curators/Collection Managers/Head of Departments & Institution, Shop-Management, Security Staff & Porters, Event managers, Scientific Staff / Operators of Specialized Equipment (e.g. Micro-CT & Nano-CT) / Restorers etc. excl. purely	Level 4-8

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

	administrative staff (e.g. accounting) & External Experts (if required not present at institution)	
B) Risk assess & analyze	Mangerial Staff and Experts (which incl. Crafts): Head of Building & Security, Crafts, Curators/Collection Manager/Head of Departments & Institution, Scientific Staff, Restorers. & External Experts (if required not present at institution)	Level 5-8
C) Plan action	Mangerial Staff and Experts (which incl. Crafts): Head of Building & Security, Crafts, Curators/Collection Manager/Head of Departments & Institution, Scientific Staff, Restorers. & External Experts (if required not present at institution)	Level 5-8
D) Implement action	Managerial Staff and Head of Institution must be driving force and include all Institutional Staff in the implementation: (please see point A) possibly including all facility management (if services are not outsourced) and administrative Staff (all available manpower may be needed in case of an emergency) as all staff should be aware of at least the basic emergency procedures.	Level 1-8
E) Measure, control and monitor	On a regular basis the Managerial Staff with the selected assistance of Subject Matter Experts, (which incl. Crafts): Head of Building & Security, Crafts, Curators/Collection Manager/Head of Departments & Institution, Scientific Staff, Restaurateurs. & External Experts (if required not present at institution).	Level 5-8

5.5. ARTE GENERALI-GERMANY

Professional figures available in the job market for each CH management task (see report 2.1)

	Profession	EQF level
A) Identify risks	art historian / engineer	Level 7
B) Risk assess & analyze	art historian / engineer	Level 7
C) Plan action	program manager	Level 6
D) Implement action	program manager	Level 6
E) Measure, control and monitor	program manager	Level 6

5.6.   ITAM-CZECH REPUBLIC

Professional figures available in the job market for each CH management task (see report 2.1)

	Profession	EQF level
A) Identify risks	Engineer (structural, fire etc.), architect, conservator, field reporter	Level 5, 6,7,8
B) Risk assess & analyze	Engineer, architect, conservator, insurer	Level 6, 7, 8
C) Plan action	All stakeholders from managers to users. Technical and non-technical actors, authorities at different levels	Levels 1-8
D) Implement action	Engineers; architects; technicians (plumbers, builders, electricians); conservation experts (restorers, conservators, diagnosticians, etc.); authorities, rescue services, universities	Level 5, 6,7,8
E) Measure, control and monitor	Managers (direction, administration, security, conservators, curators, facility employee); researchers; authorities (heritage institute)	Level 6, 7 and 8

6.   ANNEX C- Report activity 2.3

Survey with relevant stakeholders about the skills and competences they seek and about the ones they already have in staff

6.1.   Introduction

Preparation of the survey

The CHARISMA survey is organized into four main parts with the intent to determine the profile for the cultural heritage risk managers. More specifically, it focusses on the following aspects:

- **PART I**: introductory part intended for the identification of the respondent and its main activities.

- **PART II**: this section is dedicated to the determination of skills and competences available within the respondent's organization.

- **PART III**: focusing on the skills and competences needed by the respondent's organization.

- **PART IV**: this section concentrates on TRAINING activities available within the respondent's organization (this part is discussed in the report 2.5).

This questions included in the survey are mostly multiple choice with text fields allowing further detailing the answer. The survey is the product of feedback iterations within the project's partnership and it includes contributions from all partners.

6.2.   The CHARISMA survey

This survey is intended for relevant stakeholders active in the field of cultural heritage management and protection. It focuses on the skills and competences present or needed by the organizations and on the available training for their employees. It is composed of 28 questions. It has been shared as a Google form. Online version:
https://docs.google.com/forms/d/e/1FAIpQLScr-hQDbywCcI3TxunIbcChXufkkBj8Z6QImcV2cJXIRFRIWw/viewform?usp=sf_link

PART I: TELL US MORE ABOUT YOU

1/27 To which of the following categories does your organization/institution belong?

- Intergovernmental organization
- Local authority
- Central authority
- University
- Research institution
- Museum and gallery
- Business
- Association
- NGO
- Consultancy
- Local community
- Media
- Private foundation

2/27 If none of the above, please provide your category:

3/27 What type of cultural heritage does your organization/institution primarily work with?

- Movable tangible heritage (paintings, statues, books, etc.)
- Immovable tangible heritage (buildings, monuments, etc.)
- Natural heritage
- Underwater heritage
- Other

4/27 Which of the following activities better describe the role of your organization/institution?

- Curatorship
- Exhibition Management

- Preventive conservation
- Emergency management, conservation and restoration
- Transport, loans
- Insurance
- Research
- Communication and promotion

5/27 If none of the above, please provide a description of the activities carried out by your organization/institution

6/27 What are the main challenges that your organization/institution identifies in assessing and managing risks for cultural heritage?

- Lack of awareness of the risks and of how to cope with them
- Lack of funds for risk management
- Lack of suitable tools to carry out risk assessment procedures
- Lack of training in risk management
- Obstacles in finding relevant information and documentation

7/27 If none of the above, please provide a description of the challenges you identify

8/27 What kind of support would your organization/institution need to improve risk management procedures?

- Training on risks affecting cultural heritage
- Training on the impact of climate change for CH
- Training on CH risk assessment
- Training on CH risk management
- Availability of a digital platform to carry out risk assessment procedures

9/27 If none of the above, please provide a description of the kind of support you would need

PART II- AVAILABLE SKILLS AND COMPETENCES

10/27 Please indicate which of the following skills are already present in your organization/institution:

- Data mining
- Mapping of assets
- Inspection and survey of assets
- Cataloguing of assets
- Technical design of measures
- Hazard projections
- Vulnerability assessment
- Emergency services and rescuing
- Impact assessment
- Communication
- Dissemination

11/27 If none of the above apply, please specify:

12/27 Please indicate which of the following responsibilities belong to your organization/institution:

- Documentation of assets
- Assessing risk (determination of hazards, vulnerability and resilience)
- Designing measures
- Planning strategies
- Evaluating measures
- Monitoring measures
- Training stakeholders
- Insuring assets
- Early-warning
- Evacuation and rescue
- Awareness raising

13/27 If none of the above apply, please specify:

PART III- NEEDED SKILLS AND COMPETENCES

14/27 Please indicate which of the following skills are needed in you organization/institution:

- Data mining
- Mapping of assets
- Inspection and survey of assets
- Cataloguing of assets
- Technical design of measures
- Hazard projections
- Vulnerability assessment
- Emergency services and rescuing
- Impact assessment
- Communication
- Dissemination

15/27 If none of the above apply, please specify:

16/27 Please indicate which of the following responsibilities are needed in you organization/institution:

- Documentation of assets
- Assessing risk (determination of hazards, vulnerability and resilience)
- Designing measures
- Planning strategies
- Evaluating measures
- Monitoring measures
- Training stakeholders
- Insuring assets
- Early-warning
- Evacuation and rescue

- Awareness raising

17/27 If none of the above apply, please specify:

PART IV- TRAINING

18/27 Do your employees partake in additional risk management for cultural heritage training?

19/27 Which risk management for cultural heritage training does your organization provide or your employees usually participate in?

- summer school
- training day/week
- Master's
- Online/college module(s)
- seminar
- handbook
- video tutorial
- manual
- guidelines
- Digital mapping tools
- Digital mapping tools for natural risk management
- Digital mapping tools for natural risk management for the protection of cultural heritage

20/27 Could you please provide more details (e.g. title, duration, n. participants, editions):

21/27 Which risk management for cultural heritage training would your organization be interested to participate in?

- summer school
- training day/week

- Master's
- Online/college module(s)
- seminar
- handbook
- video tutorial
- manual
- guidelines
- Digital mapping tools
- Digital mapping tools for natural risk management
- Digital mapping tools for natural risk management for the protection of cultural heritage

22/27 If any, please provide more details:

23/27 Does your organization have a dedicated budget for ongoing training (of their employees)?

24/27 Does your organization contribute or host continuing training sessions?

25/27 Are there specific guidelines regarding risk management of cultural heritage your organization follows (e.g. UNESCO etc.)? Please outline them

26/27 Does your organization produce internal guidelines regarding risk management or produce training manuals regarding risk management of cultural heritage? Please describe them

27/27 Are there standard operating procedures in place within your organization regarding the management of risks/crisis? Please describe details.

6.3. Responses

PART I - TELL US MORE ABOUT YOU

1/27 To which of the following categories does your organization/institution belong?

31 risposte

Category	Value
Intergovernmental organisation	2 (6,5%)
Local authority	7 (22,6%)
Central authority	2 (6,5%)
University	1 (3,2%)
Research institution	4 (12,9%)
Museum and gallery	11 (35,5%)
Business	5 (16,1%)
Association	3 (9,7%)
NGO	3 (9,7%)
Consultancy	4 (12,9%)
Local community	1 (3,2%)
Media	1 (3,2%)
Private foundation	3 (9,7%)
Conservation laboratory	1 (3,2%)
	1 (3,2%)
FREE LANCE	1 (3,2%)
Monastery	1 (3,2%)

CHARISMA
Cultural Heritage Academy for Risk Management

Co-funded by the
Erasmus+ Programme
of the European Union

3/27 What type of cultural heritage does your organization/institution primarily work with?

33 risposte
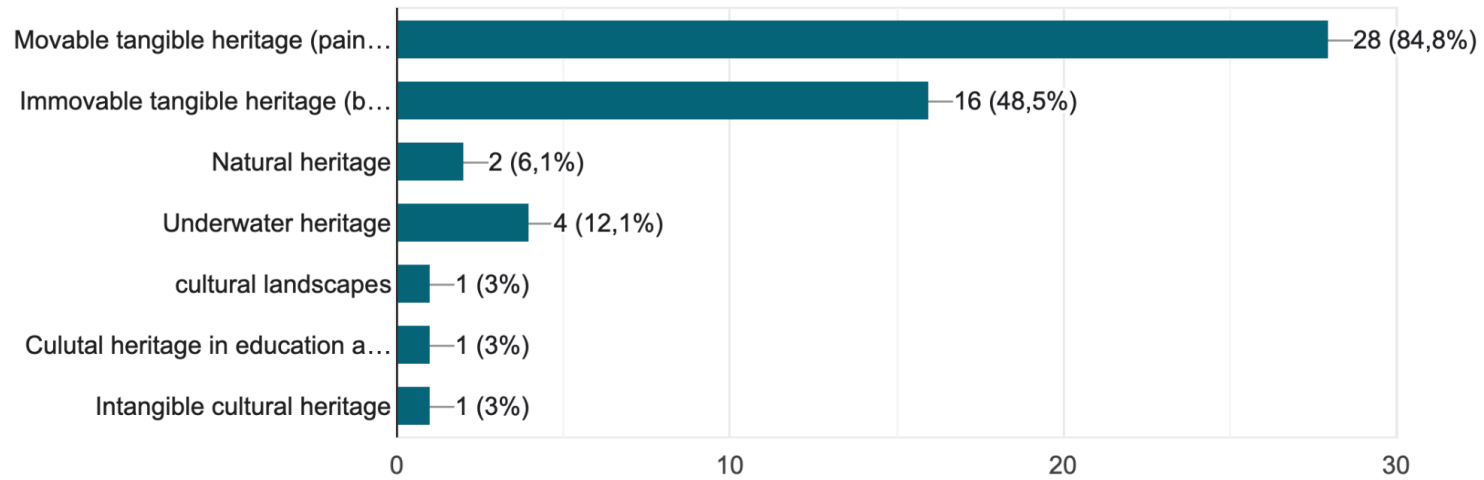
Category	Value
Movable tangible heritage (pain…	28 (84,8%)
Immovable tangible heritage (b…	16 (48,5%)
Natural heritage	2 (6,1%)
Underwater heritage	4 (12,1%)
cultural landscapes	1 (3%)
Culutal heritage in education a…	1 (3%)
Intangible cultural heritage	1 (3%)

4/27 Which of the following activities better describe the role of your organization/institution?

32 risposte

Activity	Value
Curatorship	15 (46,9%)
Exhibition management	14 (43,8%)
Preventive conservation	18 (56,3%)
Emergency management, co…	17 (53,1%)
Transport, loans	5 (15,6%)
Insurance	4 (12,5%)
Research	16 (50%)
Communication and promotion	6 (18,8%)
Education	1 (3,1%)
Cataloguing	1 (3,1%)
Advisory Body to UNESCO…	1 (3,1%)
	1 (3,1%)
Safety and Security Manage…	1 (3,1%)
Art Advisory	1 (3,1%)
Administration and projects	1 (3,1%)
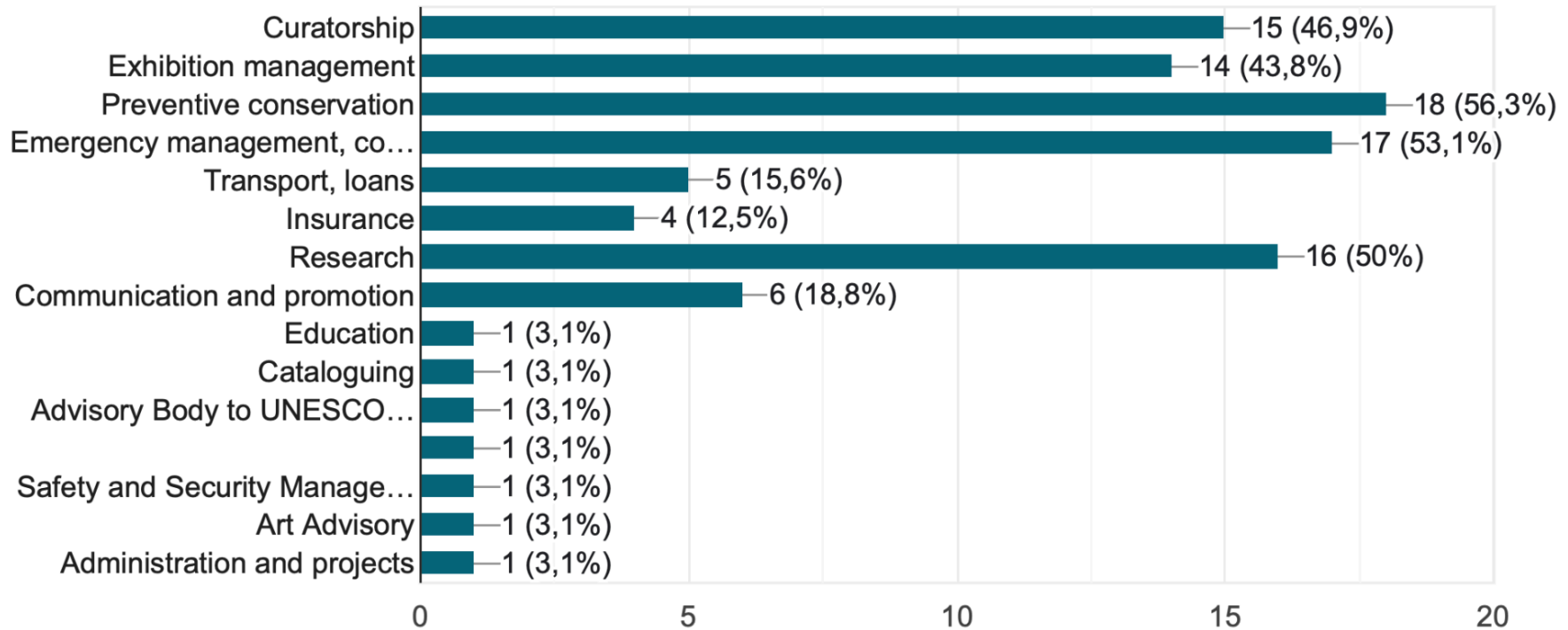
What are the main challenges that your organization/institution identifies in assessing and managing risks for cultural heritage?

32 risposte
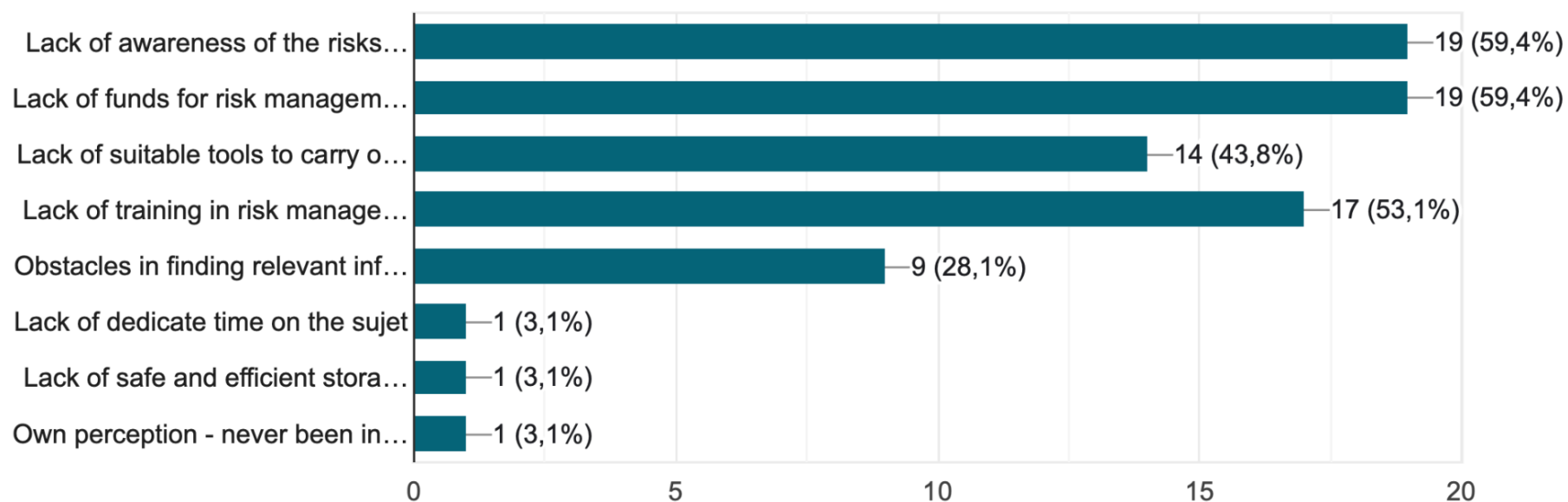
Challenge	Count
Lack of awareness of the risks…	19 (59,4%)
Lack of funds for risk managem…	19 (59,4%)
Lack of suitable tools to carry o…	14 (43,8%)
Lack of training in risk manage…	17 (53,1%)
Obstacles in finding relevant inf…	9 (28,1%)
Lack of dedicate time on the sujet	1 (3,1%)
Lack of safe and efficient stora…	1 (3,1%)
Own perception - never been in…	1 (3,1%)

What kind of support would your organization/institution need to improve risk management procedures?

33 risposte

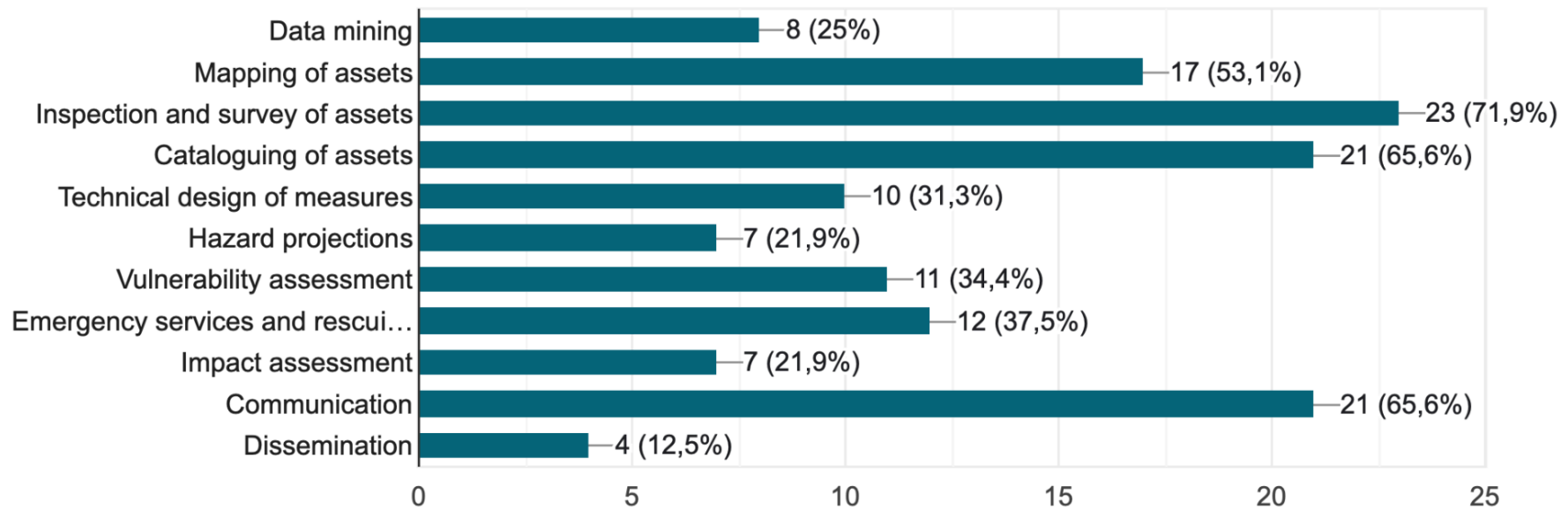|	
Training on risks affecting cultu…	22 (66,7%)
Training on the impact of climat…	12 (36,4%)
Training on CH risk assessment	15 (45,5%)
Training on CH risk management	12 (36,4%)
Availability of a digital platform…	17 (51,5%)
☐ Availability of a digital platfor…	1 (3%)
	1 (3%)
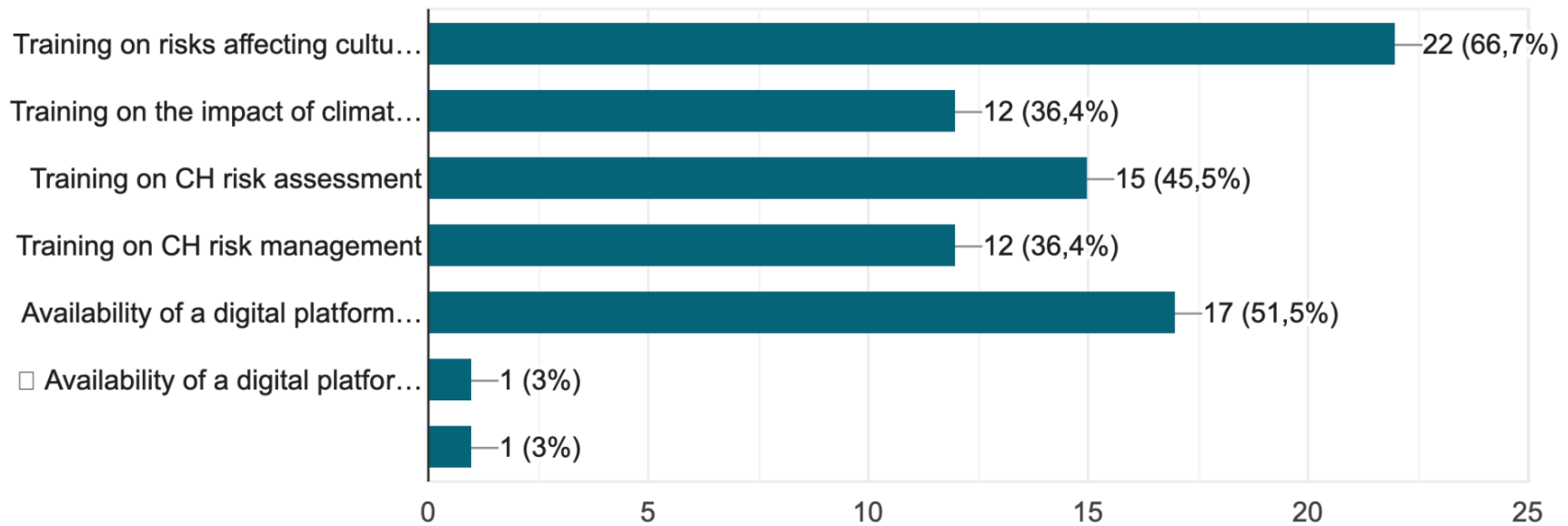
PART II - AVAILABLE SKILLS & COMPETENCE

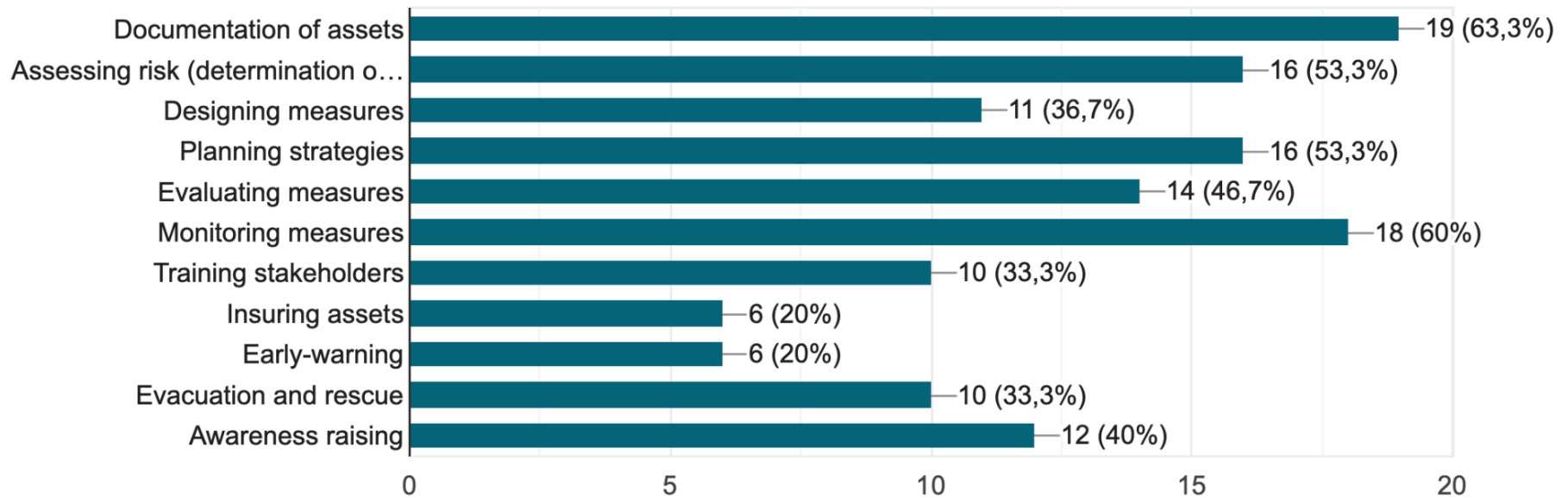## 10/27 Please indicate which of the following skills are already present in your organization/institution:

32 risposte

Skill	Value
Data mining	8 (25%)
Mapping of assets	17 (53,1%)
Inspection and survey of assets	23 (71,9%)
Cataloguing of assets	21 (65,6%)
Technical design of measures	10 (31,3%)
Hazard projections	7 (21,9%)
Vulnerability assessment	11 (34,4%)
Emergency services and rescui…	12 (37,5%)
Impact assessment	7 (21,9%)
Communication	21 (65,6%)
Dissemination	4 (12,5%)

12/27 Please indicate which of the following responsibilities belong to your organization/institution:

30 risposte

Responsibility	Value
Documentation of assets	19 (63,3%)
Assessing risk (determination o…	16 (53,3%)
Designing measures	11 (36,7%)
Planning strategies	16 (53,3%)
Evaluating measures	14 (46,7%)
Monitoring measures	18 (60%)
Training stakeholders	10 (33,3%)
Insuring assets	6 (20%)
Early-warning	6 (20%)
Evacuation and rescue	10 (33,3%)
Awareness raising	12 (40%)

CHARISMA
Cultural Heritage Academy for Risk Management
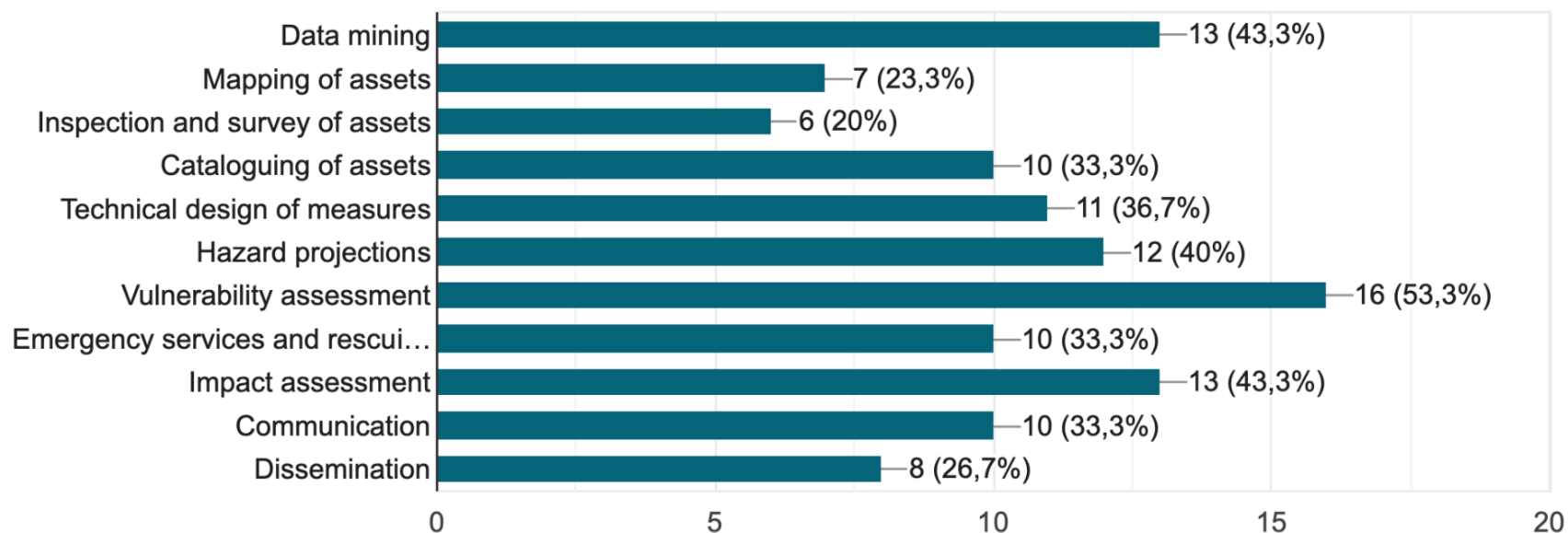
Co-funded by the
Erasmus+ Programme
of the European Union

PART III - NEEDED SKILLS & COMPETENCE

14/27 Please indicate which of the following skills are needed in your organization/institution:
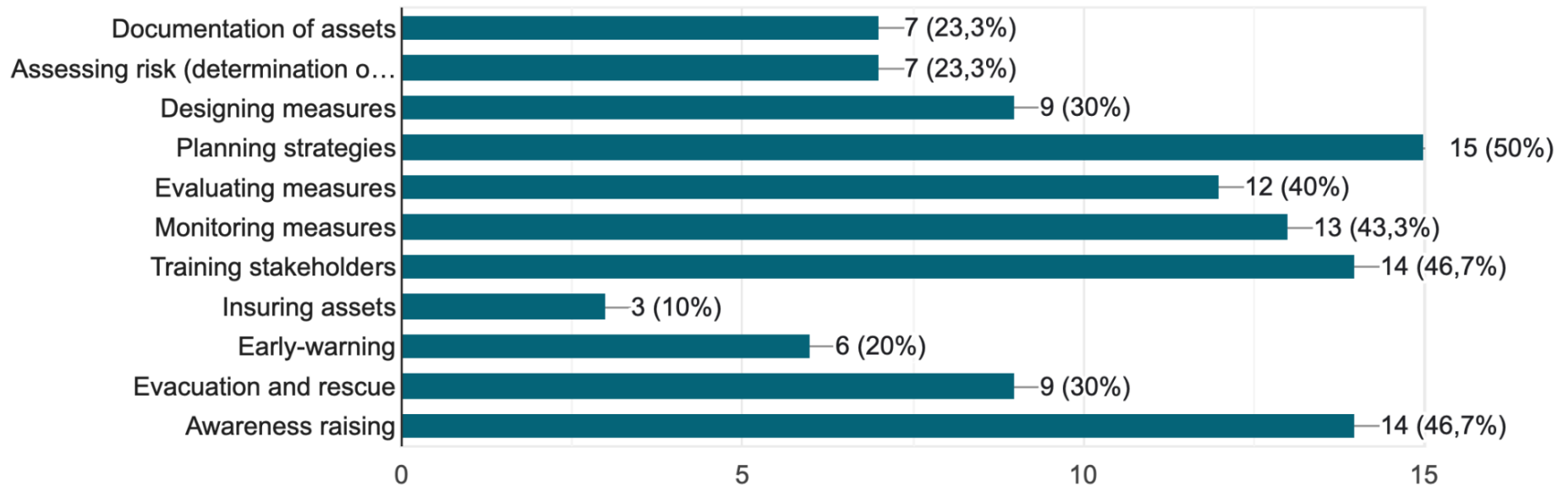30 risposte

Skill	Value
Data mining	13 (43,3%)
Mapping of assets	7 (23,3%)
Inspection and survey of assets	6 (20%)
Cataloguing of assets	10 (33,3%)
Technical design of measures	11 (36,7%)
Hazard projections	12 (40%)
Vulnerability assessment	16 (53,3%)
Emergency services and rescui…	10 (33,3%)
Impact assessment	13 (43,3%)
Communication	10 (33,3%)
Dissemination	8 (26,7%)

16/27 Please indicate which of the following responsibilities are needed in your organization/institution:
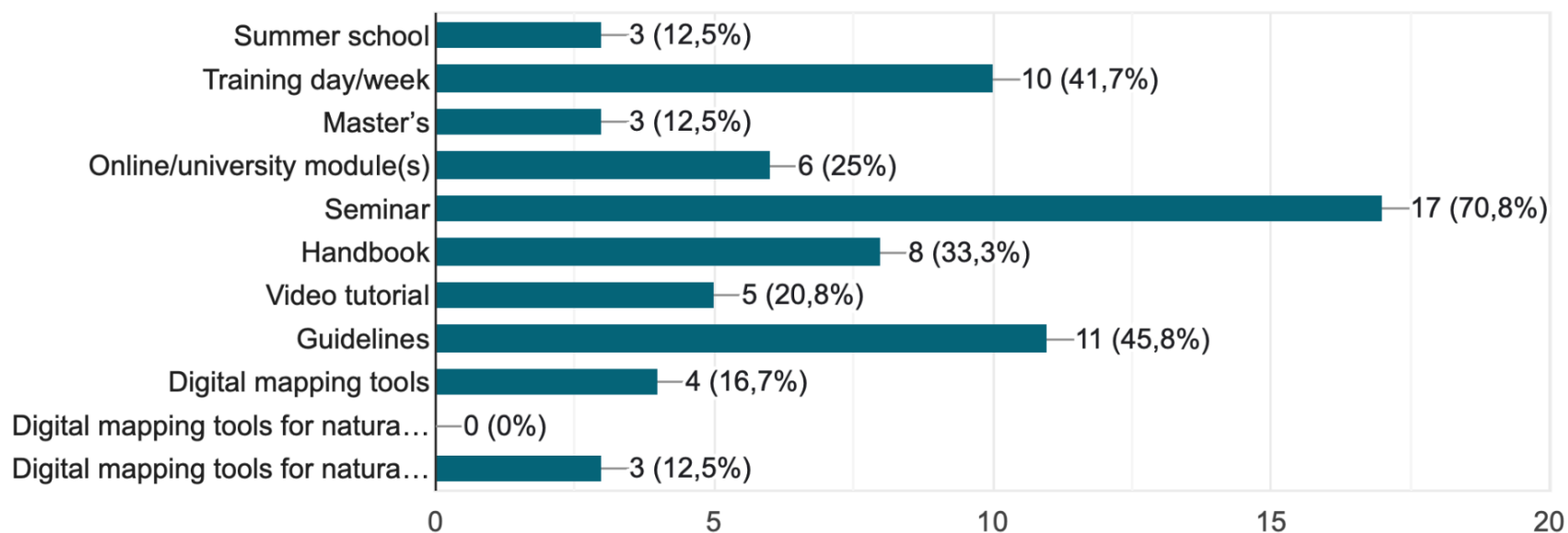
30 risposte

Responsibility	Count
Documentation of assets	7 (23,3%)
Assessing risk (determination o…	7 (23,3%)
Designing measures	9 (30%)
Planning strategies	15 (50%)
Evaluating measures	12 (40%)
Monitoring measures	13 (43,3%)
Training stakeholders	14 (46,7%)
Insuring assets	3 (10%)
Early-warning	6 (20%)
Evacuation and rescue	9 (30%)
Awareness raising	14 (46,7%)

18/27 Do your employees partake in additional risk management for cultural heritage training?
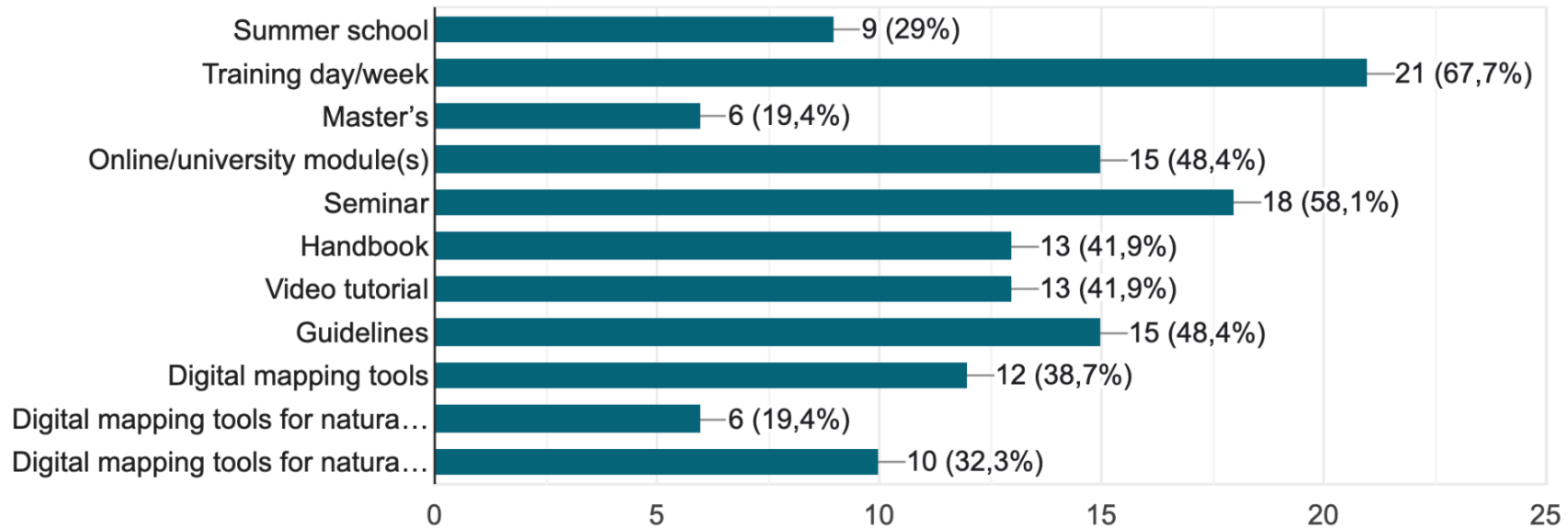
32 responses
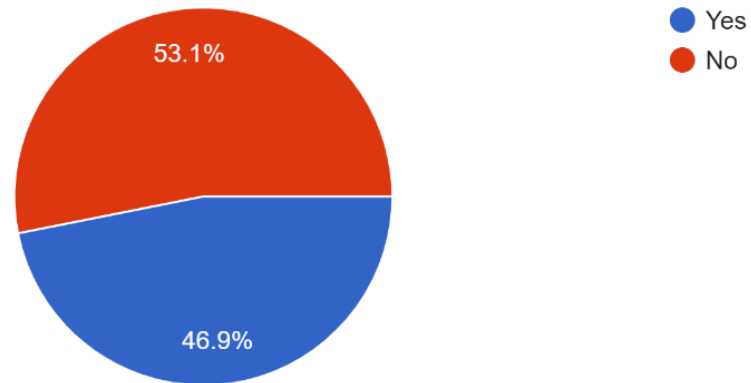
- Yes
- No

53.1%

46.9%

19/27 Which risk management for cultural heritage training does your organization provide or your employees usually participate in?

24 risposte

Category	Value
Summer school	3 (12,5%)
Training day/week	10 (41,7%)
Master's	3 (12,5%)
Online/university module(s)	6 (25%)
Seminar	17 (70,8%)
Handbook	8 (33,3%)
Video tutorial	5 (20,8%)
Guidelines	11 (45,8%)
Digital mapping tools	4 (16,7%)
Digital mapping tools for natura…	0 (0%)
Digital mapping tools for natura…	3 (12,5%)

21/27 Which risk management for cultural heritage training would your organization be interested to participate in?
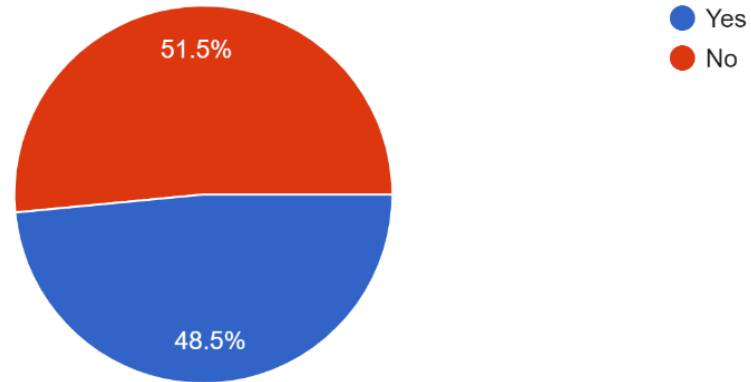
31 risposte

Category	Responses
Summer school	9 (29%)
Training day/week	21 (67,7%)
Master's	6 (19,4%)
Online/university module(s)	15 (48,4%)
Seminar	18 (58,1%)
Handbook	13 (41,9%)
Video tutorial	13 (41,9%)
Guidelines	15 (48,4%)
Digital mapping tools	12 (38,7%)
Digital mapping tools for natura…	6 (19,4%)
Digital mapping tools for natura…	10 (32,3%)

Does your organization have a dedicated budget for ongoing training (of their employees)?

33 responses
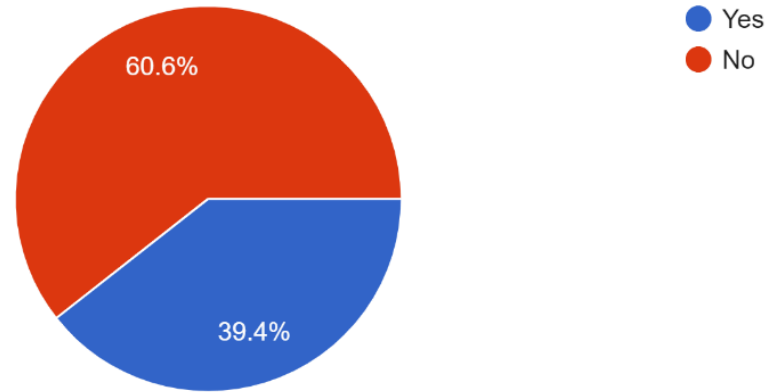
- Yes
- No

60.6%

39.4%

33 responses

- Yes
- No

51.5%

48.5%

25/27 Are there specific guidelines regarding risk management of cultural heritage your organization follows (e.g. UNESCO etc.)? Please outline them.

24 risposte

![CHARISMA – Cultural Heritage Academy for Risk Management]

Co-funded by the
Erasmus+ Programme
of the European Union
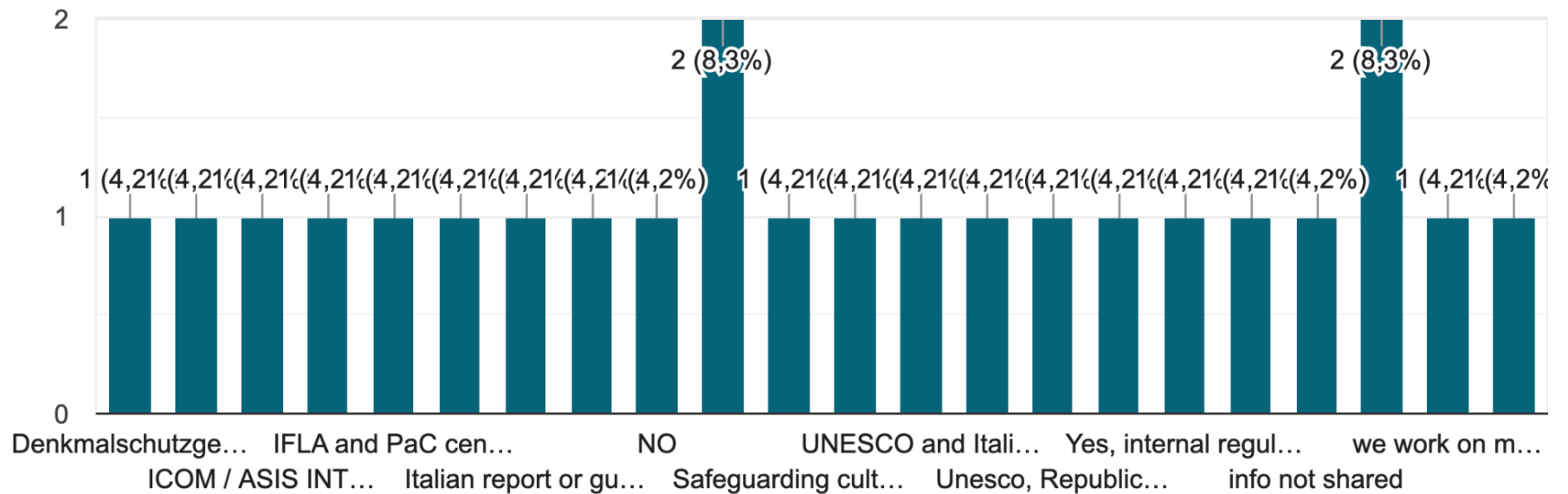
Annex D – Survey results 2.5

Specific training on risk management of cultural heritage

Responses on training

Question 18: Do your employees partake in additional risk management for cultural heritage training?

The survey delved into whether organizations provide or encourage their employees to engage in additional risk management training specifically tailored for cultural heritage preservation.

Nearly half of the respondents (44.1%) affirmed that their employees do participate in such training, indicating a recognition of the importance of specialized knowledge in safeguarding cultural heritage assets.

Conversely, the remaining 55.9% indicated that their employees do not partake in additional risk management training for cultural heritage. This suggests a potential gap in awareness or investment in proactive measures to mitigate risks to cultural heritage within these organizations.

Question 19: Which risk management for cultural heritage training does your organization provide or your employees usually participate in?

The survey sought to ascertain the types of risk management training programs offered by organizations or typically participated in by their employees.

Responses revealed a diverse array of training formats and methods.

These included traditional avenues such as training days or weeks (38.5%), seminars (73.1%), and handbooks (30.8%). Additionally, more specialized forms of training, such as summer schools (11.5%), master's programs (11.5%), and online or university modules (23.1%), were also reported. Notably, digital mapping tools for natural risk management for the protection of cultural heritage (11.5%) emerged as a niche but significant area of focus, indicating a growing recognition of the role of technology in heritage preservation efforts.

Question 20: Could you please provide more details (e.g. title, duration, n. participants, editions)

This question prompted respondents to offer specific insights into the duration, format, and participation details of the risk management training programs they provided or participated in.

The responses provided rich contextual information, offering a deeper understanding of the nature and scope of these initiatives. Details included the duration of programs (e.g., Masters: 6 months classroom + project/stage), the number of participants (e.g., Summer School ENVIMAT: 20 participants), and specific titles or topics covered (e.g., Seminar "Preventive care about library collections").

Moreover, responses highlighted practical initiatives such as disaster preparedness kits, first aid protocols, and adaptations made in response to external challenges like the COVID-19 pandemic. Collectively, these details underscored the multifaceted approach organizations undertake to equip their personnel with the necessary skills and knowledge to effectively manage risks to cultural heritage.

Question 21: Which risk management for cultural heritage training would your organization be interested to participate in?

This question aimed to gauge the interest of organizations in participating in various forms of risk management training tailored for cultural heritage preservation.

The responses provided insights into the types of training programs that organizations expressed interest in. Notably, training days/weeks (66.7%), seminars (57.6%), online/university modules (51.5%), and handbooks (42.4%) emerged as the most sought-after training formats. This indicates a strong inclination towards immersive and interactive training experiences, as well as a preference for accessible resources such as online modules and handbooks. Additionally, digital mapping tools for natural risk management (36.4%) garnered significant interest, highlighting a recognition of the value of technological solutions in addressing risks to cultural heritage.

Question 22: If any, please provide more details

We received only one answer to this question: "info not shared / issue apparently not relevant to the organization".

This response suggests that the organization either chose not to disclose specific details or found the queried issue irrelevant to its operations. This response provides valuable insights into the organization's perspective on the topic in question.

Question 23: Does your organization have a dedicated budget for ongoing training (of their employees)?

This question aimed to ascertain whether organizations allocate specific financial resources for the ongoing training of their employees. The responses revealed that a minority of organizations (37.1%) have a dedicated budget for ongoing training, while the majority (62.9%) do not.

This suggests that while some organizations prioritize continuous learning and skill development, others may rely on alternative means or ad hoc funding for training initiatives.

Question 24: Does your organization contribute or host continuing training sessions?

The purpose of this question was to determine whether organizations actively contribute to or host continuing training sessions for their employees. The responses indicated that nearly half of the organizations (45.7%) do contribute to or host such training sessions, while the remaining organizations (54.3%) do not. This suggests a mixed landscape in terms of organizational support for ongoing training initiatives, with some organizations taking proactive steps to facilitate employee development, while others may adopt a more passive approach.

Question 25: Are there specific guidelines regarding risk management of cultural heritage your organization follows (e.g. UNESCO etc.)? Please outline them.

This question sought to identify the specific guidelines or frameworks organizations adhere to in managing risks to cultural heritage. The responses provided a range of sources, including national legislation (e.g., Denkmalschutzgesetz DMSG, Ministerial Decrees), international organizations (e.g., UNESCO, ICOM), and professional associations (e.g., Museumsbund Österreich).

These guidelines encompass various aspects of risk management, from disaster preparedness to preventive care and conservation protocols, highlighting the diverse sources of guidance available to organizations in this field.

Question 26: Does your organization produce internal guidelines regarding risk management or produce training manuals regarding risk management of cultural heritage? Please describe them.

This question aimed to ascertain whether organizations develop internal guidelines or training manuals specifically focused on risk management for cultural heritage. The responses varied, with some organizations indicating the existence of internal guidelines or protocols for preventive care, evacuation, and crisis management. Others mentioned ongoing efforts to develop such resources, reflecting a commitment to enhancing organizational capacity in risk management. However, a significant number of organizations reported a lack of internal guidelines or training manuals, suggesting potential opportunities for improvement in this area.

Question 27: Are there standard operating procedures in place within your organization regarding the management of risks/crisis? Please describe details.

This question sought to explore whether organizations have established standard operating procedures (SOPs) for managing risks and crises related to cultural heritage. The responses indicated a mixed landscape, with some organizations reporting the existence of detailed SOPs covering various aspects of risk management, including safety protocols, risk assessment procedures, and crisis response strategies. Others mentioned adherence to industry standards such as ISO certifications or national regulations. However, several organizations indicated a lack of formal SOPs, highlighting potential areas for development in organizational risk management practices.

Conclusions

The survey results offer valuable insights into the landscape of risk management training and practices within organizations dedicated to cultural heritage preservation. Across the spectrum of questions, several key themes and trends

emerge, shedding light on the current state of risk management efforts and highlighting areas for improvement and future development.

Firstly, the survey reveals a notable interest among organizations in enhancing their risk management capabilities through specialized training programs. Formats such as training days/weeks, seminars, and online modules garnered significant interest, underscoring a demand for immersive and accessible learning experiences. Additionally, the interest expressed in digital mapping tools for natural risk management indicates a recognition of the potential of technology to augment risk mitigation efforts in cultural heritage preservation.

Despite this interest, challenges remain, particularly in terms of resource allocation and organizational support for ongoing training initiatives. While a minority of organizations have dedicated budgets for employee training, the majority rely on alternative means or ad hoc funding, potentially limiting their capacity to invest in continuous skill development. Similarly, while some organizations contribute to or host continuing training sessions, others may lack proactive mechanisms to facilitate employee development in this area.

Furthermore, the survey highlights the diverse array of guidelines and frameworks organizations rely on to inform their risk management practices. From national legislation to international standards and professional associations, organizations draw upon a rich tapestry of guidance to navigate the complexities of cultural heritage preservation. However, disparities exist in the development of internal guidelines and training manuals, with some organizations lacking formalized protocols for risk management.

In terms of operational practices, the presence of standard operating procedures (SOPs) varies among organizations. While some have established detailed SOPs covering various aspects of risk management, others may lack formalized procedures, indicating potential gaps in organizational preparedness for managing risks and crises.

In conclusion, while organizations demonstrate a strong interest in enhancing their risk management capabilities for cultural heritage preservation, challenges persist in terms of resource allocation, organizational support, and the

development of internal guidelines and SOPs. Moving forward, there is a need for continued investment in training initiatives, the development of comprehensive risk management frameworks, and the establishment of robust SOPs to ensure the effective safeguarding of cultural heritage assets for future generations.