Risk Identification and Monitoring

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Aim and objectives

- This presentation explains the purpose and objectives of **risk identification and monitoring**. Risk categories by type, severity and source are described. In addition, it summarizes how risks are recorded and mitigated.

- The **objectives** of this presentation are to:

  - Highlight which risk types exist
  - Define how risks are identified, analyzed and mitigated

Learning outcomes

- At the end of this presentation, you will be able to:
  - Identify the types of risks
  - Outline the main types of information a typical risk mitigation plan includes
  - Distinguish quality from quantity risk categorization
  - Recognize the outcomes of risk mitigation
  - Indicate how risks are documented

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Risk Identification

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"**Plans are nothing, planning is everything**"

D. Eisenhower

➢ **Risk identification** is a brain storming process where external experts are often called upon to identify undesirable event that are likely to occur

➢ These events may cause some **loss** (time, quality, money, customers, etc.).

➢ For each risk the manager determines what needs to be done to minimize or eliminate the risk (**risk mitigation**).

- Changes in members

- Changing the original goals

- Changing the prevailing technology

- Low level of human resources experience

- Changing the business environment

- Corrective actions during implementation

- Financial reasons, changing the required technological background or personnel

- ➢ This process **recognizes** what risks affect the project and records their characteristics.

- ➢ Risk identification can be done by individuals **internally** (project leader, development team members, etc.) or **externally** (company management, subcontractors, clients, external experts).

- ➢ This process is **repeated** as new risks may occur during the project.

➢ **Tools** used to identify hazards include brainstorming sessions, Delphi implementation, SWOT analysis and diagrammatic techniques (cause-effect, flow chart, etc.) to address the various risks.

➢ The **output** of this process is usually the recording of risks in specific forms.

➢ Identification of risks is a difficult process because there are several **types of risks**.

➢ **Quality Risk** -> the quality of processes and deliverables that in turn affect process or organizational performance

➢ **Cost Risk** -> financial goals of the organization

   ➢ Initial cost and target estimates are not accurate and / or realistic

   ➢ the risk that the economic objectives will not be met as a result of the failure to deal with the various risks

➤ **Planning Risk -> Scheduling**

- the initial estimates of the time required to execute a process are not accurate and realistic

- the risk of failing to meet the scheduling objectives as a result of failing to address the various risks

➢ **UNESCO categorizes risks as follows:**

- Risks linked to the **internal environment**, e.g. operational risks in running a project or activity. These risks will largely be within the sphere of influence of the organization, and need to be proactively managed;

- Risks linked to the **external environment;** e.g. political risks associated with Member States' home agendas. These risks will largely be outside the sphere of influence of the organization, and may require robust contingency planning;

➢ **UNESCO categorizes risks as follows:**

- ▪ Risks linked to the **interface between one or more organizations** (internal and external risks), e.g. National boards, associations etc. Managing these risks require close cooperation with partner organizations.

Examples of risks

Internal risks:

- Strategic
- Programmatic
- Operational
- operations/business process
- management and information
- organizational/general administration
- human capital/people risks
- integrity
- information technology
- Financial

Internal and external risks:

- Relationships & partnerships

External risks:

- Political
- Economic
- Socio-cultural
- Technological
- Legal or regulatory
- Environmental
- Security

Source: Risk Management Training Handbook, UNESCO

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Risk category	Illustration / issues to consider
Socio-cultural	Demographic change affects demand for services; stakeholder expectations change
Technological	Obsolescence of current systems Cost of procuring best technology available Ability to seize opportunity arising from technological development
Legal or regulatory	Regulation changes, laws/regulations which impose requirements
Environmental	Environmental/natural hazards Buildings/waste disposal/purchases need to comply with changing standards
Security	Loss/damage/theft of physical assets Staff security

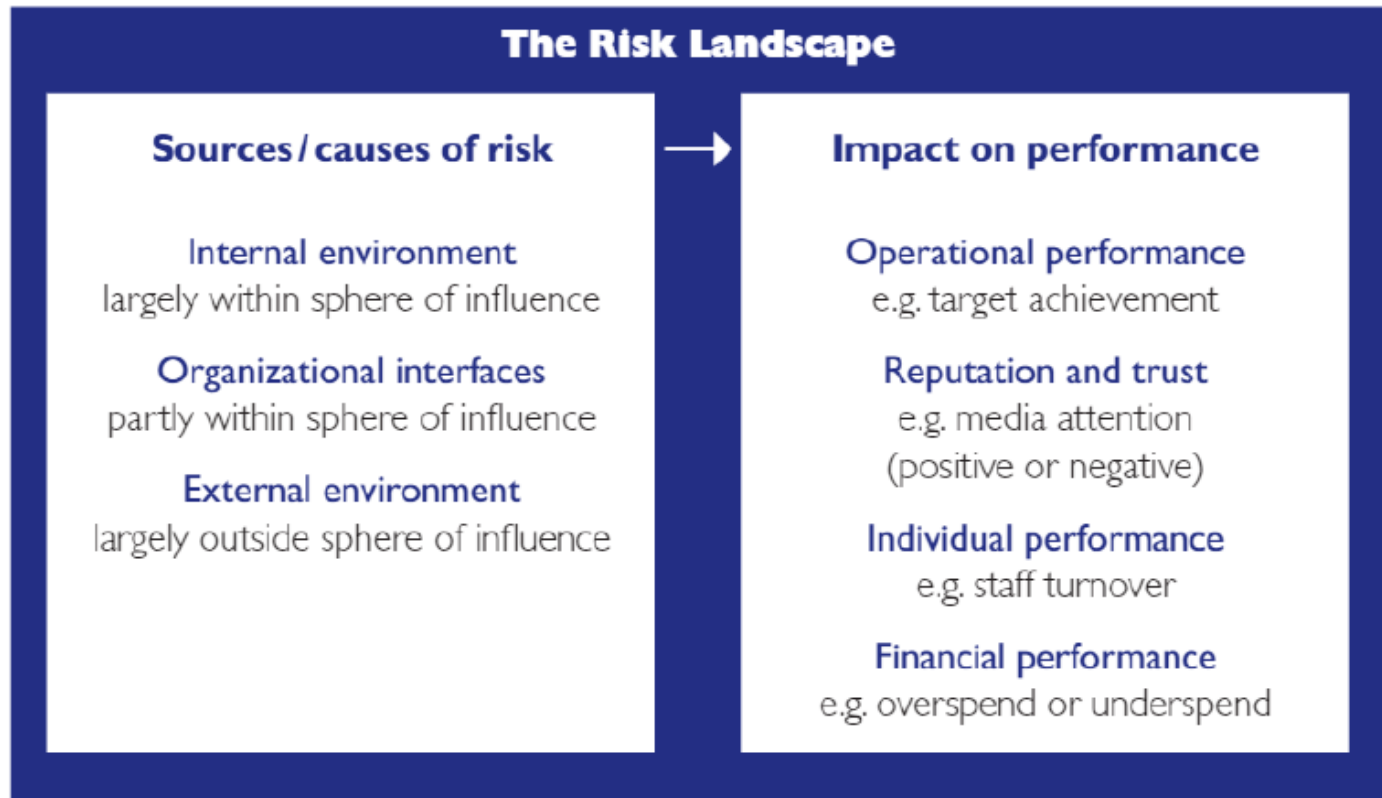Source: Risk Management Training Handbook, UNESCO

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Internal (arising from within the Organization)	
Strategic	Vague or unclear objectives for the Organization Scanning: Failure to identify threats and opportunities Positioning / visibility: Failure to position the organization in the international arena Reputation: Confidence and trust which stakeholders have in the organization and in continuing support
Programmatic	Unadapted, ill-conceived or overly ambitious sector programmes Programmes outside the scope of UNESCO or not within the framework set out in the C/4 and C/5 documents

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Source: Risk Management Training Handbook, UNESCO

Examples of risks: mixed type

Internal and External (arising from both the external environment and the Organization itself)	
Relationships and partnerships	Delivery partners (threats to commitment to relationship / clarity of roles) End users (satisfaction with delivery) Accountability (particularly to Governing Bodies)
Financial	Insufficient project funding, poor budget management Inadequate use of funds, failure to deliver activity within a set budgetframe

Source: Risk Management Training Handbook, UNESCO

Impact of risks

Identifying all risks is essential since most of them may have an impact on organizational performance:

The Risk Landscape

Sources/causes of risk →

Internal environment
largely within sphere of influence

Organizational interfaces
partly within sphere of influence

External environment
largely outside sphere of influence

Impact on performance

Operational performance
e.g. target achievement

Reputation and trust
e.g. media attention
(positive or negative)

Individual performance
e.g. staff turnover

Financial performance
e.g. overspend or underspend

Source: Risk Management Training Handbook, UNESCO

Risk impact matrix

Impact level	Impact on time scheduling	Impact on project quality	Impact on the cost of the project
High	Significant deviation of over than 30%. Milestones need to be reset.	Significant effects. Major project objectives not reached	Cost increase >20%
Medium	Medium deviation between 10% and 30%. Some milestones need to be readjusted.	Some effects	Cost increase between 5% and 20%
Low	Small deviation of about 10%. No need for adjustments.	Minimum effects	Cost increase <5%

Risk probability matrix

The probability of a risk to occur is calculated based on the following **probability matrix**:

Probability	Percent
High	>30%
Medium	10-30%
Low	<10%

An initial risk assessment is possible through the following Risk Priority matrix, which combines risk impact and probability to derive **risk priority**.

Impact	Probability	Priority	Priority number
High	High	High	1
High	Medium	High	1
High	Low	Medium / High	2/1
Medium	High	Medium	2
Medium	Medium	Medium	2
Medium	Low	Low / Medium	3/2
Low	High	Low	3
Low	Medium	Low	3
Low	Low	Low	3

Risk prioritization: an example

Risk	Priority
Stakeholders become disengaged	1
Design lacks flexibility	1
Process inputs are of low quality	1
Project results poorly communicated	2
Stakeholders do not support project	2
Project results difficult to be used	2
Requirements are ambiguous	2
Legal & regulatory change impacts project	2
Impacted individuals aren't kept informed	3
Market or technical change forces impact project	3
Stakeholders have inaccurate expectations	3
Project results out of date	3

Risk Identification

➢ Now let us see 4 simple steps for Risk Identification!

➢ The 1st step in Risk Identification is the analyses of the **context** of the organization.

➢ In this step we try to understand all relevant aspects of the context in which Museum assets are situated.
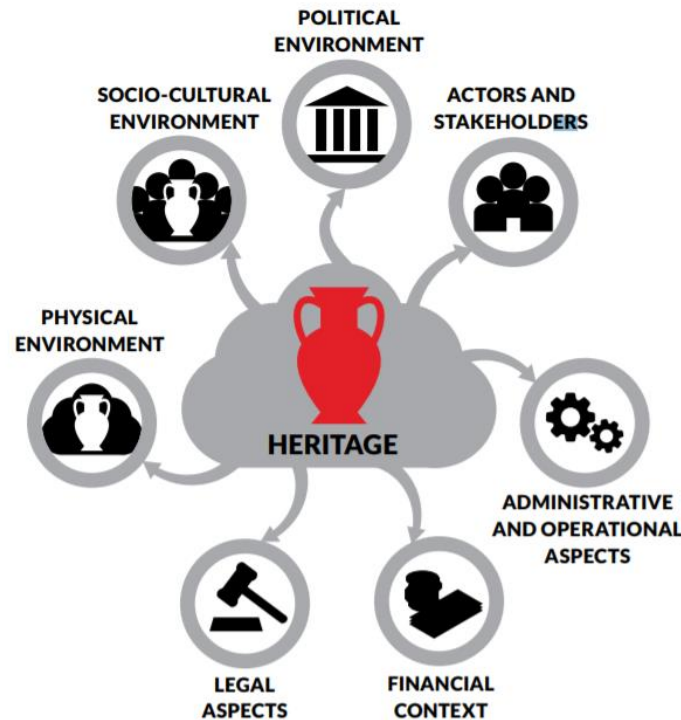
Source: ICCROM (2016). A guide to risk management of cultural heritage.

POLITICAL ENVIRONMENT

SOCIO-CULTURAL ENVIRONMENT

ACTORS AND STAKEHOLDERS

PHYSICAL ENVIRONMENT

HERITAGE

ADMINISTRATIVE AND OPERATIONAL ASPECTS

LEGAL ASPECTS

FINANCIAL CONTEXT

➢ The 2ⁿᵈ step in Risk Identification is the identification of **actors** or **stakeholders** that may be the source of risk or may contribute to risk mitigation.

➢ It is also important to identify all the actors, inside and outside the organization, that can help the process (from the cleaning and security staff to the Director and the heritage authority, the fire brigade, the police, the civil defense, the local community, universities, potential donors, etc.).

➢ Objectives must be clearly defined, as well as the scope of actions.

➢ The 3rd step in Risk Identification is the identification of **impact** or **occurrence** that of each risk.

➢ Impact and occurrence matrixes may be used.

➢ The impact of risks to cultural heritage artefacts may also be expressed in terms of the **expected loss** of value to the heritage asset.

➢ A museum identified the following risks for its collection:

- ■ 'a large earthquake damaging the heritage asset is expected to occur about once every 300 years',

- ■ 'theft of heritage items is expected to occur about once every 30 years',

- ■ 'rainwater infiltration through the roof affecting the is expected to occur about once every 3 years', etc.

- ■ When the risks are of the '**cumulative process**' type we try to estimate how fast the damage will accumulate.

➢ The 4th step in Risk Identification is the **recording** of the risk information in special forms. One risk at a time is recorded.

RISK IDENTIFICATION FORM

Area of Impact	Identified Risk	Description of Risk

Analysis of Risk Without Controls	Likelihood	Consequence	Risk Level
Description of Any Existing Controls			
Analysis of Risk with Existing Controls	Likelihood	Consequence	Risk Level
Risk Acceptance	☐ Accepted ☐ Accepted with Existing Controls ☐ Not Accepted ☐ Not Accepted – Explore Treatment Options (complete Part B – see over page)	Reasons:	

Identify Possible Treatment Options	

Preferred Treatment Option	Description	Reasons:

Analysis of Risk with Preferred Treatment Option	Likelihood	Consequence	Risk Level

Risk Acceptance	☐ Accepted ☐ Not Accepted	Reasons:

Person to Implement Treatment	
Time Frame for Implementation	
Monitor Treatment	
Time Frame for Review of Risk	

Risk Analysis

Qualitative Risk Analysis (1/2)

> This procedure classifies the risks that have been identified so that they can be addressed.

> The classification can be done based on many factors such as probability, consequences, project timing, tolerability or combinations thereof.

> It is a process that is repeated at regular intervals since the priority of a risk can change during the project.

➤ The techniques used to classify risks focus on brainstorming and / or meetings between staff members.

➤ With the help of Impact and Probability matrix the risks are classified in a list (usually the top 10 list). These tables have default values set based on the experience of the scientific community or the company itself in similar projects.

➤ They contain price combinations of probabilities and consequences that lead to an assessment of the level of seriousness of a risk.

➤ **Quantitative analysis** uses specific techniques such as Monte Carlo simulation or Decision Trees to assign values to the risks categorized by Qualitative Analysis.

➤ These values give an estimate of the probability that the project objectives will be met, estimate the% contribution of each risk to the overall project risk and set realistic cost, schedule and project objectives based on the identified risk assessment.

➤ They also suggest decisions that must be taken by project management when the situation is uncertain due to the risks.

➢ The **methods** used to determine these values include:

- Sensitivity Analysis

- Sensitivity and Risk Analysis

- EMV (Expected Monetary Value analysis)

- Decision Trees

- Simulation

Risk Mitigation

➢ **Risk response planning** is the process of determining actions that reduce risks before they become threats (**risk mitigation**) or reduce their impact when they do become threats (**contingency planning).**

➢ This procedure determines the actions to be taken to reduce the likelihood of identified risks becoming problems. The most common tactic used is to accept risks and deal with them through specific plans when they tend to become a problem.

Risk response plan

➢ The result of this process is the **Risk Response Plan** or Contingency Plan.

➢ It is prepared for any risk that is likely to develop into a problem having serious consequences. It should be formulated in greater detail than the risk registration form including:

- the strategy to follow when the risk becomes a problem

- the timeframe in which the plan will be active

- who is responsible for activating it

- a list of people who should be notified that the plan is active.

➢ The composition of the plan depends on the risks identified. One technique for drafting it is to record the answers in the following list of questions:

- How will managers be informed that a risk is going to become a problem?

- When the risk arises, how will it be known when the plan should be implemented?

- What preparations will have to be made to implement the plan?

Risk response plan composition (2/2)

- Has the plan been tested?

- Who will be responsible for implementing the plan?

- Who should be notified that the plan has been activated?

- What changes will be made to the project when the plan is activated? Will the processes, costs or specifications change and if yes how?

- How will the timing of processes be affected?

- Will there be a need for extra staff?

- Who is responsible for the communication?

List of references

- Risk Management Training Handbook (2010). UNESCO.

- ICCROM (2016). A guide to risk management of cultural heritage.

- Running a Museum: a practical handbook (2004). International Council of Museums/UNESCO.

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Thank you for your attention!

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Project Number: 575907-EEP-1-2016-1-EL-EPPKA2-SSA

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MAPA DAS IDEIAS