Municipal Infrastructure Support Programme
An EU-funded project

MUNICIPAL INFRASTRUCTURE SUPPORT PROGRAMME
Building together for the future
PROGRAM PODRŠKE RAZVOJU INFRASTRUKTURE LOKALNE SAMOUPRAVE
Gradimo zajedno za budućnost

RISK MANAGEMENT

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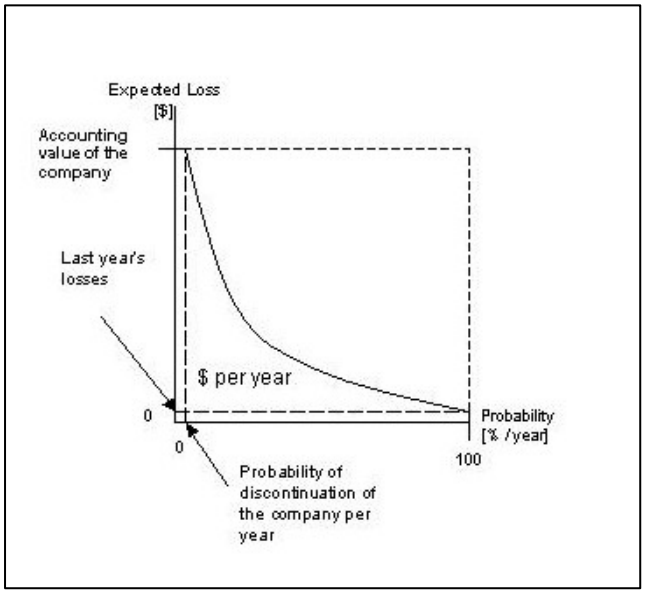
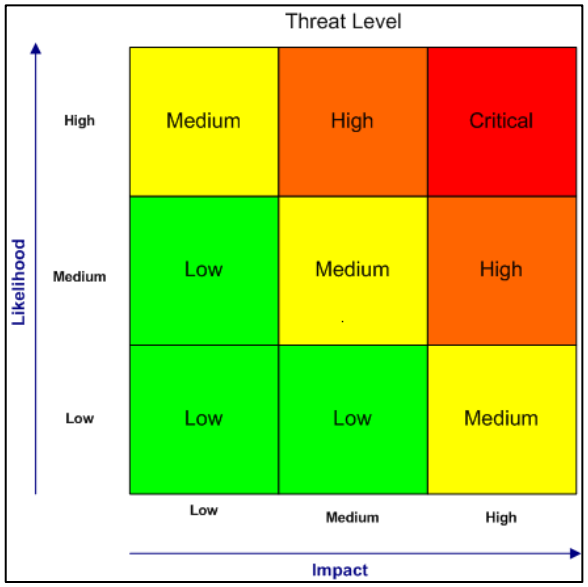
➢ What is Risk Management?

❑ **Definition**: **Risk management** is a structured approach to managing uncertainty related to a threat, a sequence of human activities including: risk assessment, strategies development to manage it, and mitigation of risk using managerial resources.

➢ Risk assessment

Risk assessment is a common first step in a risk management process. Risk assessment is the determination of quantitive or qualitative value of risk related to a concrete situation and a recognized threat.





➢ Strategy

The Strategies include:

- transferring the risk to another party,
- avoiding the risk,
- reducing the negative effect of the risk,
- accepting some or all of the consequences of a particular risk.

- The objective of Risk management is to reduce different risks related to a preselected domain to the level accepted by society.

- It may refer to numerous types of threats caused by environment, technology, humans, organizations and politics.

- In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss and the greatest probability of occurring are handled first (red square in the scheme), and risks with lower probability of occurrence and lower loss are handled in descending order. In practice the process can be very difficult.

➢ Steps in the risk management process

- ❑ Identification of risk
- ❑ Risk assessment
- ❑ Potential risk treatments

➢ Identification of risk

• After establishing the context, the next step in the process of managing risk is to identify potential risks. Risks are about events that, when triggered, cause problems. Hence, risk identification can start with the source of problems, or with the problem itself .

• Risk sources may be internal or external to the system that is the target of risk management.

• Problem analysis risks are related to identified threats .

- Common risk identification methods are :

- Objectives-based risk identification

- Scenario-based risk identification

- Taxonomy-based risk identification

➢ Risk assessment

Once risks have been identified, they must then be assessed as to their potential severity of loss and to the probability of occurrence.

These quantities can be either simple to measure (in the case of the value of a lost building), or impossible to know. Therefore, in the assessment process it is critical to make the best educated guesses possible in order to properly prioritize the implementation of the risk management plan.

The fundamental difficulty in risk assessment is determining the rate of occurrence since statistical information is not available on all kinds of past incidents.

➢ Potential risk treatments

Once risks have been identified and assessed, all techniques to manage the risk fall into one or more of these four major categories:

- **Avoidance** (eliminate)
- **Reduction** (mitigate)
- **Transference** (outsource or insure)
- **Retention** (accept and budget)

➢ Create a risk management plan

- Select appropriate controls or countermeasures to measure each risk.
- Risk mitigation needs to be approved by the appropriate level of management.
- A good risk management plan should contain a schedule for control implementation and responsible persons for those actions.

➢ Review and evaluation of the plan

• Risk analysis results and management plans should be updated periodically. There are two primary reasons for this:

• to evaluate whether the previously selected security controls are still applicable and effective, and

• to evaluate the possible risk level changes in the business environment

Risk management is simply a practice of systematically selecting cost effective approaches for minimising the effect of threat realization to the organization.

All risks can never be fully avoided or mitigated simply because of financial and practical limitations.

Therefore all organizations have to accept some level of residual risks.

Whereas risk management tends to be preemptive, *business continuity planning* (BCP) was invented to deal with the consequences of realized residual risks.

The necessity to have BCP in place arises because even very unlikely events will occur if given enough time.

Risk management and BCP are often mistakenly seen as rivals or overlapping practices. In fact these processes are so tightly tied together that such separation seems artificial.

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COST CONTROL

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- During the execution of a project, procedures for project control and record keeping become indispensable tools to managers and other participants in the construction process.

- These tools serve the dual purpose of recording the financial transactions that occur as well as giving managers an indication of the progress and problems associated with a project.

- The problems of project control are aptly summed up in an old definition of a project as "any collection of vaguely related activities that are ninety percent complete, over budget and late.“

- Interpretation of project accounts is generally not straightforward until a project is completed, and then it is too late to influence project management.

- Even after completion of a project, the accounting results may be confusing. Hence, managers need to know how to interpret accounting information for the purpose of project management.

- Project control procedures are primarily intended to identify deviations from the project plan rather than to suggest possible areas for cost savings.

- The time at which major cost savings can be achieved is during planning and design for the project.

- During the actual construction, changes are likely to delay the project and lead to inordinate cost increases.

- the focus of project control is on fulfilling the original design plans or indicating deviations from these plans, rather than on searching for significant improvements and cost savings.

- For cost control on a project, the construction plan and the associated cash flow estimates can provide the baseline reference for subsequent project monitoring and control.

- The final or detailed cost estimate provides a baseline for the assessment of financial performance during the project.

- To the extent that costs are within the detailed cost estimate, then the project is thought to be under *financial control*.

- For control and monitoring purposes, the original detailed cost estimate is typically converted to a *project budget*, and the project budget is used subsequently as a guide for management .

- Expenses incurred during the course of a project are recorded in specific job cost accounts to be compared with the original cost estimates in each category.

- Thus, individual job cost accounts generally represent the basic unit for cost control. Alternatively, job cost accounts may be disaggregated or divided into *work elements.*

- In addition to cost amounts, information on material quantities and labor inputs within each job account is also typically retained in the project budget.

- With this information, actual materials usage and labor employed can be compared to the expected requirements.