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Transparency in Risk Management Does Mitigation and Decision-Making Process of Management

Tangible goods used for production, machinery, equipment and appliances, as well as natural forces and laws affected by them, which are allowing the creation of more favorable life conditions are often unpredictable and destroy what man creates and, eventually, cause property damage and aggravate the chances for progress of a mankind, production companies and society in general. Economic damage that thus occur, impelled the scientists to examine the frequency of such damage, in order to minimize or remove them completely.

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1. Introduction

Risk identification is the first step in a proactive approach to risk management. Figure 1 shows input, output and activities of the risk identification. Risk identification provides possibilities, ways of response and information which enable the team to identify important risks that could affect the project. In order to identify risks, members of the team conduct a series of "brainstorming" discussions and open discussions to determine the importance of risk for the project. In order to facilitate this process, risk factors are grouped in various categories.

Factors can be classified further into the categories such are factors of mission and objectives, decision makers, managers of the organization and available funds and costs. The objectives of risk identification are making the list of risks that need to cover all parts of the project. The risk identification (Figure 2) can be carried out according to schedule (e.g. daily, weekly or monthly), objective (in the project plan), or event (significant negative events in business, technology, organizational and environmental conditions). Activities of the risk identification should be conducted periodically, according to the goals determined by the type of project.

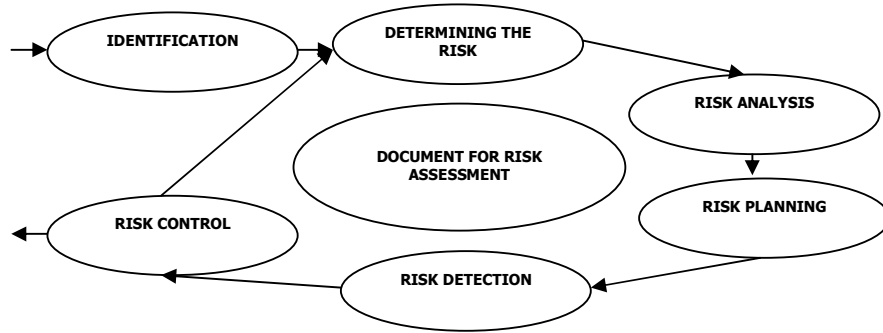


Figure 1. The risk management

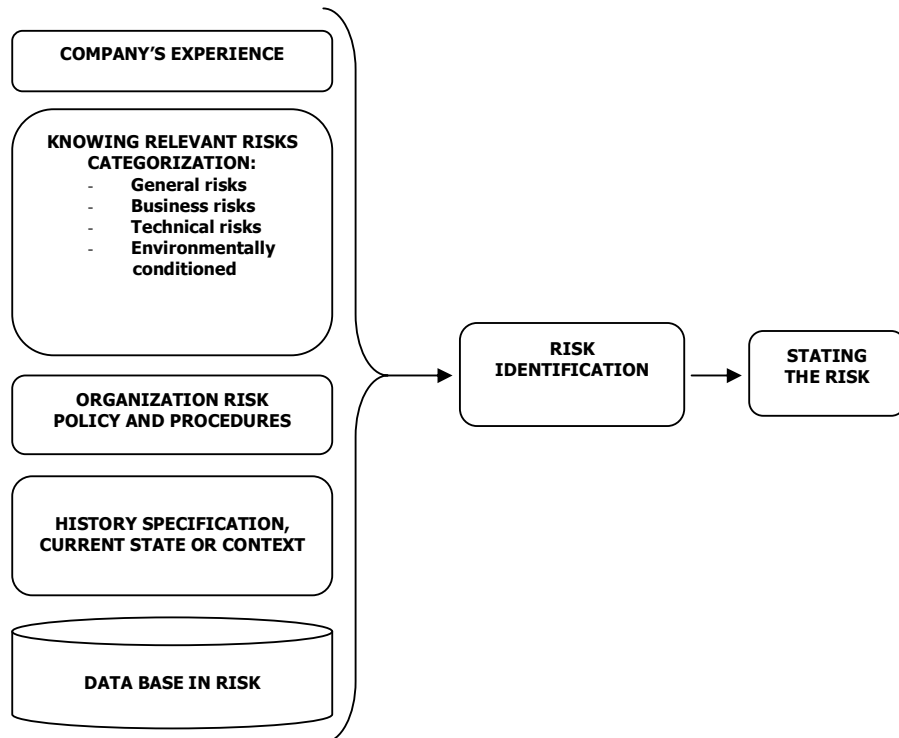


Figure 2. Identification of risk

2. Risk analysis

For any risk detected in a table of risk factors, its existence should be indicated and made a priority. Risk must be clearly explained and defined before managing it. When determining the risk, both the manifestations of risk and its causes and results should be taken into consideration.

For the development of e-business applications, risk classification during the identification of risk is necessary because it enables the creation of a database needed for risk monitoring. Within the risk identification, risk classification helps the team to determine the parts of the project in which the risk would occur and compare it to similar projects or previous experience. Creating a document is important for the success of the project because it allows one to monitor risks through all phases of the life cycle of the project.

Risk analysis involves the conversion of data about the risk into the form that enhances decision-making. Determining the priority of risk ensures that members of the team first consider the most important project risks.

In the risk analysis, the team examines the list of risks, makes the priorities and defines the "major risks" that will determine the resources for planning and implementing specific strategies. The team may also determine the risks that are not a priority so that they can be removed from the list. Inputs and outputs of this step are shown in Figure 3.

There are many quality and quantity techniques for the determination of priorities on the list of risks. Two of the most common techniques for the determination of the priorities of risk are: the probability and power of the risk. These indicators are used for the determination of the exposure to risk.

Probability of risk means the likelihood that an event will actually happen. Common percentage between 0 and 100 can be used for the ranking of risk. Only risks that have a probability per cent bigger than 0 are considered. Only risks of 100 per cent are sure, namely they are the problems. The scale using the numbers from 1 to 3 that match probability of 25, 50 and 75 percent is more efficient, because the arguments that make the difference between the probability of 60 and 70 per cent are usually not clearly defined.

Power of risk measures the strength of negative effects or the size of damage that may be caused by the realization of risk. Determination of ways to measure the obtained loss is not a simple problem. If risk affects financial losses then the measure can be the euro. Financial losses can be long-term costs in the implementation and support, reducing the representation of the product on the market, one-shot additional costs or the costs of lost chances. When the financial losses are understood, the risks can be put in categories from 1 to 5 according to their power, the most dangerous risks being put into the 5th group. High values indicate serious damage for the project, while the mean value indicates that the damage for certain parts of the project or reducing efficiency.

In order to evaluate the list of risks, the overall risk impact on the project must be taken into account. Sometimes the risks that have a high probability to be realized and little power, can be ignored. Also, risks that have great power and low probability can also be ignored. Risks that have both values high are subject to management. In the management process, either their probability or the power is managed.

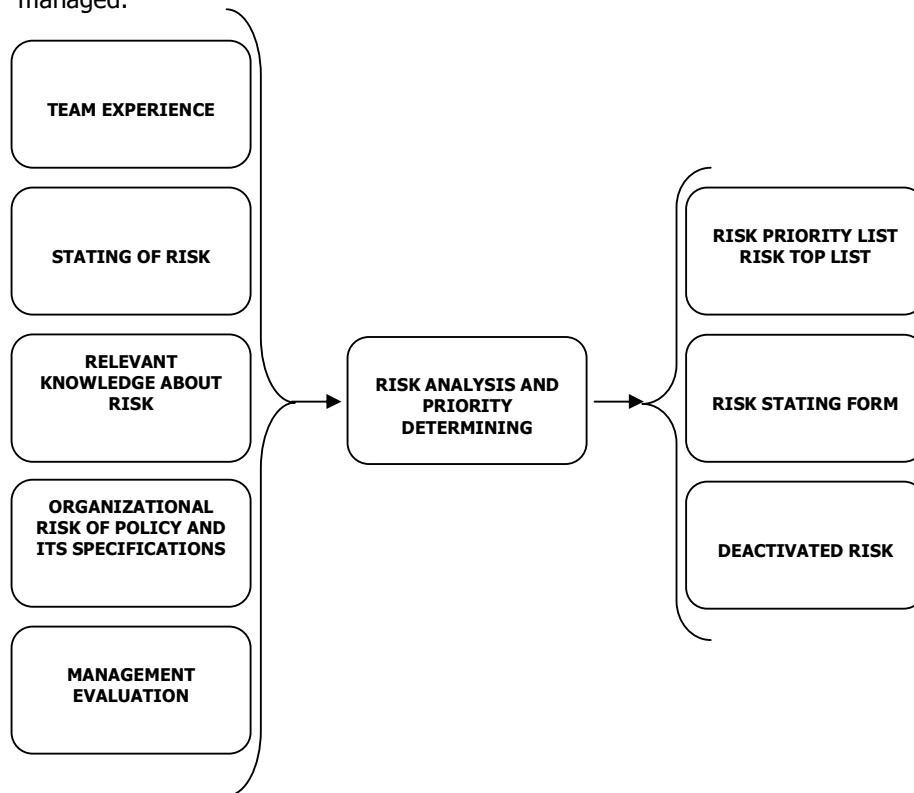


Figure 3. Risk analysis and priorities [37]

The information about the risks are usually placed in tables or databases as follows:

- Risk identifier - Name of the risk uniquely defined by it,
- Risk source - Source may be determined by the central area (software development, infrastructure development), or by category (mission and objectives, decision makers) and factors (political influence, the stability of the organization),
- Circumstances - It describes the circumstances that lead to a loss,

- Consequences – it qualifies and quantifies the damage that will occur if the risk is implemented,
- Probability - describes the probability of occurrence of the damage caused by a realization of a risk. The probability is expressed by the values 1, 2 and 3 that correspond to 25, 50 and 75 percent, respectively,
- The power of risk - damage of the project that will occur in the case the risk is realized; it is expressed in euros or numbers from 1 to 5, indicating their intensity,
- Exposure to risk - includes parallel analysis of power and probability of risk. The result is obtained by multiplying the values for these two indicators,
- Content of the risk - used for describing the risk and problems in more details, and
- Risk connection - the list of risk identifiers for pointing out the interconnected risks.

After ranking the risks with regards to the exposure to risk, the activities should be directed towards the determination of strategy and the way to include plans about prevention in the overall vision of the project. Both simple and effective technique is also making a list of top 10 biggest risks for the project. All project managers must be familiar with this list. In addition, it is necessary to include this list into the vision document made within the first phase, as well as into the major plan project made within the planning stage; this is essential in order for the key participants to be familiar with these risks.

3. Planning risk

In planning the risks, information about the risk are transformed into actions, Figure 4.

Planning the risks include planning the actions for each risk separately, the determination of priority actions, and creating documents for the assessment of risk.

The aim of planning the risks is to develop detailed plans for risk monitoring identified during the analysis, and to integrate them into the standard project management processes to ensure that they are completed. Figure 9 shows the process of planning the risks.

The planning should consider the four basic aspects related to each risk:

- Research - Do we know enough about the risk? Is it necessary to gather more information and determine the characteristics of each risk in better way before making the decision regarding the actions that should be carried out?

- Accepting - Are we able to face the consequences of the risk realization? Can the risk be accepted and can we go on without any further action?
- Management - Is there anything to be done that will reduce the damage if the risk occurs?
- Avoidance - Can the risk be avoided?
- When you identify the risks required by the action, one of three possible actions must be carried out:
 - Reducing the probability of realization of risks,
 - Reducing the size of damage, and
 - Changing the consequences of the risk.

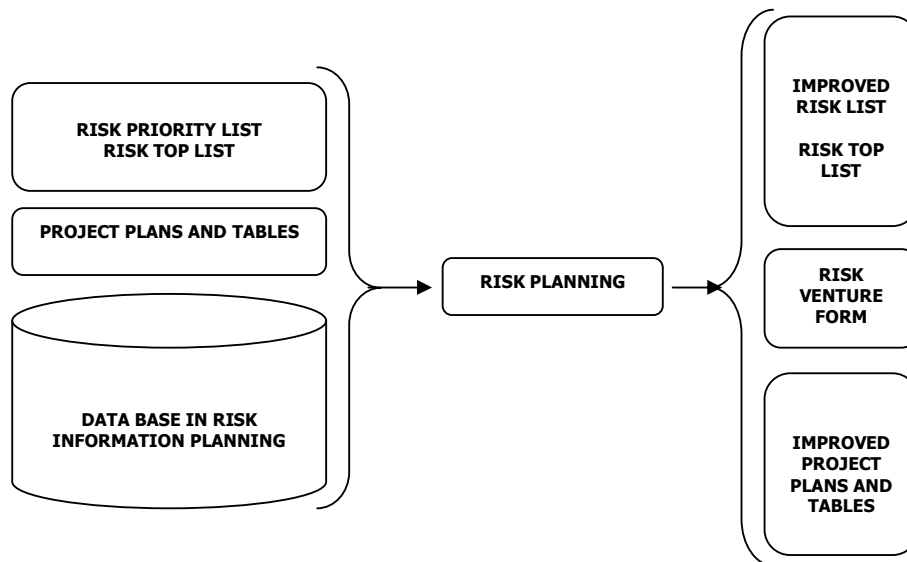


Figure 4: Planning the risk

In order to access the creation of the major plan of the risk assessment, it is necessary to identify several key concepts for each risk.

- Risk identifier - Name of the risk uniquely de
- Description of risk - the conditions that lead to the realization of risk, and the consequences thus obtained,
- Strategies for risk management - a description of actions to be taken regarding certain risks, including the assumptions introduced,
- Measurement of strategy success,
- The probability - describes the probability for occurrence of the damage caused by realization of a risk,

- The power of risk - damage of the project that will occur in the case the risk is realized,
- Exposure to risk - Exposure to risk - includes parallel analysis of power and probability of risk,
- Action - describes the actions that will be carried out in the management of risk. All activities will be included in the system for risk detecting,
- Deadlines - dates by the end of which all planned activities must be completed,
- The allocation of tasks – determines the tasks for each member of the team,
- Strategy of contingency - describes the plan that will be applied if the plan of action in the management of risk is not successful.

4. Risk detection

Detection of the risk is essential for successfully defining a plan of action. It is a process in which the team checks the risk and actions to be taken in order to alleviate the risk. Reports of the risk status can identify one of four possible situations:

- The risk is eliminated, and the plan of action is over,
- Action are carried out as planned, in this case work on actions continues,
- Action are not carried out as planned, in this case measures for correction should be undertaken or contingency plan should be implemented, and
- The situation has changed significantly regarding one or more risk and it is necessary to do the revision of rating.
- During carrying out of actions for risk management, total exposure to risk should be reduced.

5. Risk control

The fifth step in risk management process is risk control. This involves carrying out of the activities related to risk control. This step is shown in Figure 5.

After defining the values of risk drives, the difficult part of management is completed. Now the risk management is merged with the project management process which includes:

- Plan of action for the risk control,
- Corrections in the case of deviations from the plans,
- Responding to specific drive values, and
- Improvement of risk management process.

- Learning from the risk is of strategic importance to the activities of risk management. Phase of learning is sometimes called the power of risk which stresses the value and significance the organization involves to improve the process of risk management.

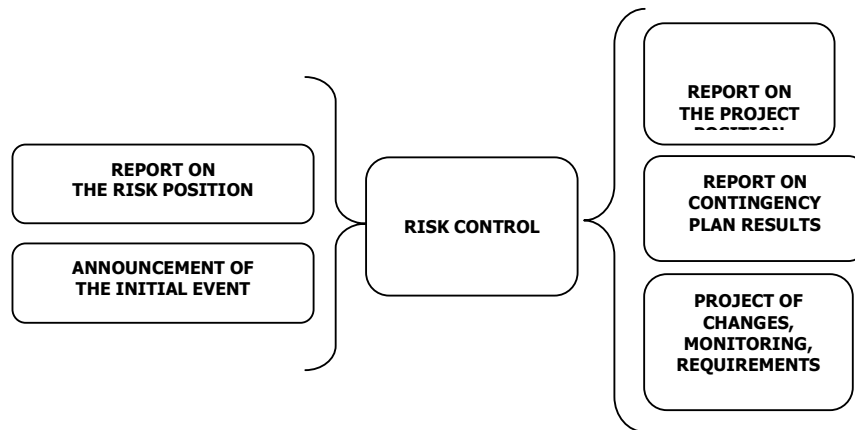


Figure 5: Risk control

6. Conclusion

Risk management, the activities and management access are directed towards the preservation of property and company's income, as well as prevention of the risk of loss, especially the random and unexpected ones. Risk can be reduced by performing preventive actions and improving caution measures, to allocate funds to pay for losses or to transfer risk to insurance companies, for example. This is an anticipation instrument of crisis management, which tends to increase security. Usually the goal is accomplished through risk analysis, measures to increase security, control over the risks.

Risk analysis recognizes and evaluates the risks for objectives and company's activities. Usually, there is a difference between the tangible and intangible risks: tangible ones are related to the risk of losses, and intangible ones to the uncertainty whether an event will cause gains or losses. After the goals and activities are determined as risky, the definition of the frequency and amount of damage of these risks takes place. Measures to increase security are mastered by the risks described or they are reduced. Monitoring of the risks is a permanent activity because they change over time, they come and go, and their frequency and value of damage are also changeable. The efficient management of risks assumes permanent education in order to deal the new risks with new knowledge.

The purpose of the risk management is increasing the risk transparency for facilitating the process of management and decision-making. Risk management gives clearer insight into the future and potential outcomes, opens new horizons

and evaluates management goals and strategies with respect to the risks. Risk management is important for the wholeness of the company; it creates a strategic advantage over the competition. It does not upgrade business management process, but makes it more transparent and efficient.

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