

RISK MANAGEMENT AND TRANSPORT INFRASTRUCTURE

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Summary: Enterprise risk management is the integrated approach to deal with risks in a company. There are described in the paper steps, approaches and selected methods/techniques implemented in enterprise risk management.

INTRODUCTION

Characteristic of the current economic situation can be described:

- * increase in the complexity of economic relations due to globalization and strengthening of mutual bonds of national and international economic relations,
- * technological development generating pressure on innovation and shortening the product life cycle,
- * acceleration of socio-economical and technological processes, which generate pressure on human resources (quality, mobility) as well as on flexibility of social systems.

All of the above factors cause an ever-stronger pressure on company, its flexibility to react to changing conditions, external as well as internal.

RISK

All management decisions must take above mentioned factors into account. A crisis as the result of unresolved conflicts (internal, external) is a natural, unwanted part of company activities.

The authors define risk as follows:

Risk [4] is an inherent sign of every decision, whether good or bad.

Risk [10] is a qualitative and quantitative expression of hazard, the level or degree of hazard. It is the likelihood of the occurrence of negative event and its consequence.

I will understand risk as the likelihood of the occurrence of a certain event, which has specific attributes/qualities. In common communication risk is associated with negative, undesirable behaviour of the system.

- * in business practice approach to risk is as follows:
- * risk is measurable (or there is an effort to identify and quantify it),
- * linked to the expected risk return of an entrepreneur; the higher the exposure the higher the expected return of the entrepreneur,
- * identification, analysis and presentation of potential sources of crisis events is a form by which the business sector minimizes the effects of risk factors on the company's activities; by applying the results of risk evaluation it is possible to analyze potential outcomes of identified risks and establish precautionary measures to lead the company out of crisis and measures for company's recovery,
- * communication with all participants connected with management decisions and company activities – shareholders, management, employees, state administration, the public,...
- * the business strategy optimizes the approach to risk management considering costs,
- * the classical instrument for minimizing the effects of crisis is insurance.

RISK MANAGEMENT

Risk management consists of steps – see figure 1.

Risk Assessment - the content of this step consists of risk analysis and risk evaluation. As an enterprise operates within external and internal environment the role is to identify relevant risks, consequences and probabilities. The content and variety of applied tools depends on the approach, experience and type of business.

Risk Treatment- is the approach to implement strategies e.g. risk avoidance, risk transfer, risk financing. The important in the risk treatment approach is the fact to evaluate benefits and costs. The result of the cost/benefit analysis gives ground, reasons to implement the appropriate, efficient risk strategy.

Monitoring – the change is immanent to the external and internal environment of an enterprise. Therefore one of the key objectives is to identify responsibilities, content of reports and the information flow within an enterprise in risk monitoring.

In this paper I will apply the categories of enterprise risks [3]:

- * Market risks,
- * Credit risks,
- * Operational risks.

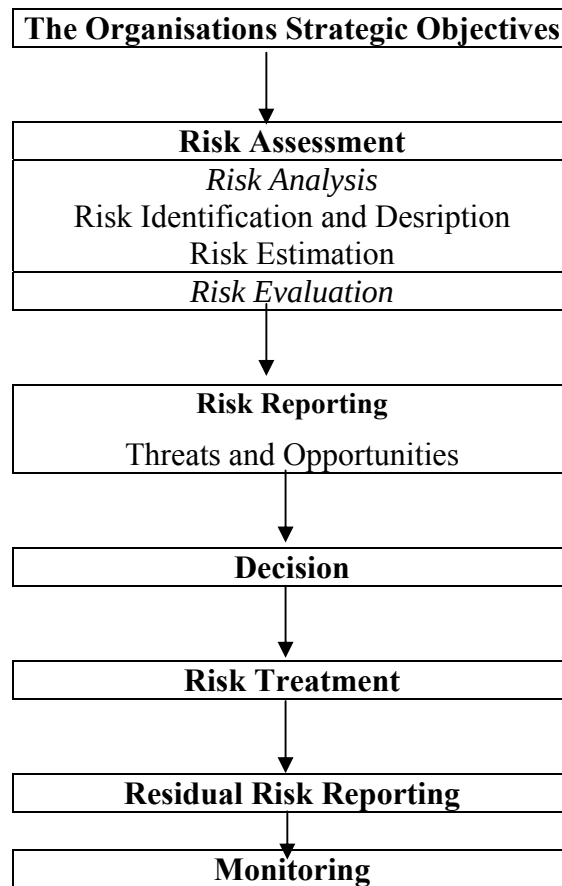


Fig. 1 Risk Management Framework [7]

In relation to company crisis and risk management, company culture is a key phenomenon that will test the flexibility of management, the extent of employees' identification with company objectives, adequacy of communication (its content and form) within and outside the company, the correctness of existing technology or technological methods.

I see the position and relations of enterprise risk management as the part of business continuity management and an integral part of company strategy management.

Enterprise		
Crisis Management and Business Continuity Management (BCM)		
Risk		
Risk Management, Enterprise Risk Management	Business Continuity Planning (BCP)	
Planning	Crisis and Recovery	
Before Crisis	Crisis	After Crisis

Fig. 2 Hierarchy and relations among different categories in subjects Crisis management and Business continuity management

These are the most important conclusions for a company in applications and day-to-day risk management:

- * permanent identification of mistakes and problems as possible sources of company risks,
- * learning from mistakes,
- * evaluation of mistakes and their carriers not for the purpose of identifying guilty persons, but as groundwork for proposal of optimization of company processes.

Transport and critical infrastructure

Transport infrastructure sector includes the following segments: aviation, the railways, maritime shipping, roads and highways, short-distance traffic. The role of each segment is important for business and non-business environment. The hazard, emergency with heavy impact on any of the segments can cause damages for all sectors and economy.

Because of practical reasons (economical, operational,...) is not acceptable to implement unified preventive measures there is applied framework of critical infrastructure. Critical infrastructures consist of those physical and information technology facilities, networks, services and assets which, if disrupted or destroyed, would have a serious impact on the health, safety or economic well-being of citizens or effective functioning of governments in the Member States [8].

Transport infrastructure damage, threats, terrorist attacks or natural disasters reduce economic strength and undermine the economical and political stability of the country. Therefore the preventive measure must be implemented. In their implementation there must be applied following principles:

- * the limited parts of transport segment can be included into critical infrastructure (the criteria – scope, magnitude, effect of time –for more details see [8]),
- * apply risk management principles in process of identification, measuring and controlling risks
- * the transport network as well as Europe's critical infrastructure is highly connected and interdependent,
- * the activities to defend transport infrastructure (critical transport infrastructure) should be coordinated between owners and operators, regulators and professional bodies ,
- * because of interdependence and connection national security measures should be coordinated within international community (for EU members – within EU bodies).

Conclusion

Risk is part of all business activities. All management decisions must take into account risk and try to anticipate it. Besides its objective aspect, i.e. expression of probability, which determines the occurrence of event, the subjective approach to risk also, plays a significant role. Dealing with risk specific towards transport infrastructure (critical

transport infrastructure) means to apply risk management steps as was described in the paper.

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