INTEGRATING RISK MANAGEMENT IN THE GENERAL MANAGEMENT OF RDI INSTITUTIONS

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Abstract - This article addresses the role and importance of risk management in the organizational management of RDI institutions, which, due to the economic crisis in recent years have faced many barriers in achieving the goals that they had to meet. The publication of the International Standard ISO 31000:2009 – “Risk Management. Principles and guidance at the organization level” allows RDI institutions to better understand the risks they can be exposed to and to take the best steps to reduce and treat them. The article aims to highlight the importance of identifying and evaluating risks that can occur within an organization and the team role in the implementation, monitoring, reviewing and continuously improve the management process.

Keywords: Risk management, research and development, ISO 31000:2009.

1. Introduction

At the current stage, efficient organization and conduct of research and development has become a key factor of progress. Although in recent years there has been a decreasing trend in the total number of staff for all sectors of research, the complex task of systematic search of the new, of the development of science and technology and of recovery of knowledge gained in economic and social activities, scientific research is the basic factor in the process of refurbishment and development for many industries.

In the modern society based on knowledge, particularly dynamic, in transformation and in constant search for new ways of operating, recovery and transmission of information, it is important to keep the standards of performance and competitiveness, a dynamic adaptation to the environment, the combination of a growing number of factors in an increasingly internationalized context.

Every organization is considered a dynamic system that continuously interacts with many factors from the internal and external environment factors that create a continuous state of uncertainty. But the risk system is also in constant transformation and therefore specialists are always looking for ways to limit uncertainty and risk system that can disrupt running processes underlying the activities of an organization. The International Standardization Organization has identified a number of risk management principles, whose architecture requires compliance with well-defined stages, of which the most important are: risk identification, risk management process planning, analysis and risk assessment resulted in decision making and risk treatment.

2. What is Risk Management?

Considering the risk as a combination of the occurrence probability of an event and its consequences, today it is considered that in all types of organizations there is potential for events and consequences, which constitute opportunities for benefit or threats to success. [1]

In an organization, risk management should be a major part of any strategic management. It must be the process by which the organization methodical analyzes the risks that occur during activities the purpose being of achieving benefits.

Risk management must be integrated into the culture of the organization with an effective policy and a program led by the top management. It must transpose the strategy into tactical and operational goals, assuming responsibility in the organization together with the managers and staff responsible for risk management as part of work tasks. Risk management should be an ongoing process in development that goes through the organization's strategy and its implementation. It methodically addresses the risks: both from previous activities of the organization and present, but especially those in the future. It may help to understand the potential increases or decreases of all factors affecting the organization, it increases the likelihood of success and reduces the probability of failure and the uncertainty of achieving the overall objectives of the organization.

The objective of any organization is to bring maximum added value to all activities. Consequently, risk management focus must be on identifying and treating these risks. In ISO 31000:2009 - Risk Management.
Principles and guidelines, risk management structure is designed in a framework that takes into account both internal influences in the organization, but also external influences of the organization.

It is believed that ISO 31000:2009, Risk management. Principles and guidelines will help organizations of all types and all sizes to effectively manage risk, the standard providing principles, framework and guidelines for managing all forms of risk in a systematic, transparent and credible way in any field and in any context.

The standard recommends organizations and businesses to devise and implement a risk management framework that will be integrated into their overall management system and continuously improved.

In the same standard it is specified that to be effective, risk management in an organization must adhere to the following principles [2]:

a) Risk management creates and protects value, contributing to achieving the objectives and performance improvement in the fields of occupational safety and health, compliance with legal regulations, environmental protection, product quality, efficiency, organization management, the company’s reputation;

b) Risk management is an integral part of organizational processes, it must be part of the managerial responsibilities and an integral part of normal organizational processes as well as part of project management and change management;

c) Risk management is an integral part of the decision making process, it can prioritize actions. Risk management helps decision makers to make informed choices, allowing decision when a risk is unacceptable;

d) Risk management explains uncertainty it must identify the nature of uncertainty and how it can be treated;

e) Risk management should be systematic and well structured - the results obtained should be practical, comparable with similar results and reliable;

f) Risk management should be based on the highest quality information;

g) Risk management must be properly accounted for;

h) Risk management should take into account human factors - it needs to know the skills and capabilities of personnel that may reduce or to the contrary increase risks;

i) Risk management must be transparent and inclusive, timely and openly to all interested persons (stakeholders) involvement, it should ensure that risk management is relevant and constantly updated;

j) Risk management should be dynamic, iterative and able to respond to change - once internal and external events to the organization occur, the context and knowledge change, old risks disappear or become acceptable while new risks emerge;

k) Risk management must be able to allow the continued development of the organization.

3. How Does Risk Management Integrates in the Organizational Management?

Risk management is an activity organized and planned, intermingled with the general management and its subordinate. It is based on three separate components built into its own system, as well as into the general management: operational management, essential activity management, logistic support. [3]

Resources required to implement risk management policy of the organization should be clearly defined at each level of management and within individual business units.

In addition to other operational functions, such involvement in risk management has a role in coordinating clearly defined risk policy / strategy. The same clear definition is necessary for those involved in audit and review of internal control processes and to facilitate risk management processes.

Risk management should be embedded in the organization through strategy and budget. It should be emphasized in training and development processes as well as in operational processes. Into the development of products and services.

Management of essential activities ensures conditions of efficient deployment of productive activities or services, including business connections with clients or with other competing or complementary, similar companies.

Operational management is the activity to develop current or prospective decisions, corrections, adaptability, hierarchic accountability, parametric and structural amendments, human relations, quality tests, surveys, planning and evaluation of business relationships.

Logistic support is common business and full operation support, including human resources, financial resources, energy and information as well as suitable business environment and production, support and protection, and private insurance and overall functionality.

Risk management process includes several activities: (Figure 1)

![Risk Management Process Activities](image)

*Figure 1: Risk management process activities*
Communication and consulting with internal and external stakeholders must occur in each stage of the risk management process and communication and consulting plan must take into account the following aspects:

- communication and consulting should be an exchange and not a monologue of each stakeholder;
- communication and consulting should cover every honest and understandable message and should not be manipulated but compelling based on evidence;
- communication should be useful and its contribution must be evaluated.

Establishing the context defines the basic parameters for risk management and sets the purpose and the criteria for the rest of the process. The context can include both internal and external parameters relevant for the organization. Attention to these factors should ensure that the approach to risk management is suitable for both the organization and the risks that it affects.

Risk identification seeks to identify risks relevant to the objectives of the organization. The organization should identify sources of risk, events or sets of circumstances and potential consequences. Identification should include all risks, whether or not are controlled by the organization. The organization should use the most appropriate tools for its objectives. People with appropriate knowledge should be involved in this activity.

The most common risk identification techniques are brainstorming, questionnaires, business studies, industrial benchmarking, scenario analysis, workshops for risk assessment, incident investigation, audits and inspection.

Risk analysis aims to understand the risks, while providing an input to the risk assessment and the decision whether the risks should be treated and to the most important strategies of treatment.

Risk analysis involves consideration of the causes and sources of risk, their positive and negative consequences and the probability that these consequences occur. Factors affecting the likelihood and consequences can be identified. Risk is analysed by identifying its consequences and probabilities as well as other risk attributes. Risk analysis can be considered with varying degrees of detail, depending on the risks, information, data and resources available.

The analysis is:

- qualitative
- semi-qualitative
- quantitative or a combination thereof, depending on the circumstances.

In practice, qualitative analysis is used to obtain a general indication of the level of risk and to reveal major risks. When possible, qualitative analysis must be replaced with quantitative analysis.

Risk acceptability assessment involves comparing the level of risk found in the risk analysis with established risk criteria when the risk has been identified.

In this respect, it should be taken into account both the organization’s objectives and the extent of possible opportunities. When a choice must be made, it will depend on the organizational context. Decisions must take into account the broader context of risk and must include considerations relating to risk tolerance - including other economic units involved (subcontractors, etc.).

Risk treatment involves addressing one or more options of approaching risks and implementing these options. Risk treatment may require a cyclical process of:

- evaluation of a particular type of treatment;
- decision of residual risk tolerability level;
- generating a new risk treatment;
- reassessment until the desired residual risk level is reached.

Risk Treatment options include the following:

- risk avoidance by deciding not to start or not to continue the work that led to the risk;
- search of an opportunity by deciding to start or continue an activity that leads to risk;
- change probability;
- change consequences;
- “sharing” risk to third party or third parties.

The selection of the most appropriate option involves the balance between cost and efforts for implementing against derived benefits. Risk treatment options can be applied individually or in combination. Decisions must take into account rare but serious risks that can validate risk treatment actions that are not economic justified.

Legal requirements and social responsibility exceed cost-benefit analysis. Risk treatment options must take into account the values and perceptions of stakeholders as well as the best way to communicate with them.

If risk treatment options may impact the risk of another part of the organization, these areas must be involved in the decision. If resources are limited, the plan will have to prioritize the most important measures. Risk treatment itself induces risks. A significant risk may even be the failure or inefficient risk treatment measures.

Monitoring should be an integral part of risk treatment plan to have the assurance that measures are efficient.

Secondary risks should be incorporated throughout the initial plan and not treated as a new risk.

An effective risk management requires a reporting and reviewing structure to ensure that risks are effectively identified and assessed and that appropriate measures of control and response have been taken.

Periodic audits must be conducted in conformity with the policies and standards and performance standards should be reviewed to identify opportunities for improvement. It should be remembered that organizations are dynamic and operate in a dynamic environment.

Changes in organization and in operating environment should be identified and appropriate changes made to the system.
The monitoring process ensures that appropriate control measures are taken for activities of the organization and the procedures are understood and followed.

Any process of monitoring and review should also determine: resulted measures adopted; procedures adopted and information provided to perform the assessment where necessary; improving knowledge will help make better decisions and identify lessons to be learned for future evaluation and risk management.

4. How to Control the Risk?

There are several methods for responding to risks. Eliminating risk can be done by eliminating the action conditions of the risk, by eliminating its impact on the organization’s activities, meaning to eliminate or to bring the risk to the insignificant category for the organization’s goals.

Risk transfer to another organization is one way to control the risk. This transfer can be accomplished by providing a guarantee for risks from the vendor for products / services purchased or by transferring the risk of cost by paying additional costs to the client (eg banks, building). Another way to control risk is to reduce probability of occurrence of risk. This method involves choosing stable and acknowledged providers, accepting redundant or making more complete assessments.

Risk acceptance involves the development of contingency plans to be considered in case of risk.

Risk monitoring involves a risk monitoring to see if the occurrence probability changes over time. This approach is suitable for significant risks with low probability of occurrence.

Risk avoidance involves eliminating the cause that creates the problem. This is a way to eliminate the risk, but obviously can only be used in certain circumstances.

5. Conclusions

All activities of an organization involve risks that must be managed. Risk management process adds taking decisions, considering the uncertainties and considering the possibility of future events and circumstances (intentional and unintentional) and their effects on proposed objectives.

When implemented and supported according to the standard 31000, risk management must be able to achieve the following objectives in an organization: become aware of threats caused by risks; be able to manage the risks within the organization; allocation and effective use of resources for risk treatment; enhanced security; improved financial reporting; improved identification of opportunities and threats; Improved incident and prevention management; improved operational efficiency and effectiveness; to reduce losses.

To be effective in an organizational context, risk management must be developed considering: the general leadership of the organization, management, reporting processes, internal policies of the association.

6. References