



MARMARA UNIVERSITY
INSTITUTE FOR GRADUATE STUDIES
IN PURE AND APPLIED SCIENCES



**ENTERPRISE RISK MANAGEMENT IN
PUBLIC INSTITUTIONS:AN
IMPLEMENTATION IN TURKEY**

MUSTAFA DURMUŞ

MASTER THESIS

Department of Industrial Engineering

ADVISOR

Prof. Dr. Seniyye Ümit Oktay FIRAT

CO- ADVISOR

Prof. Dr. Ümit BİTİTÇİ

ISTANBUL, 2014



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Mustafa, DURMUŞ

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ÖZET

KAMU KURUMLARINDA KURUMSAL RİSK YÖNETİMİ: TÜRKİYE’DE UYGULAMASI

Ülkemizde 2000’li yılların başlarında meydana gelen ekonomik kriz ile birlikte kamu kurumlarında kurumsal yönetim sistemlerinde değişikliğe gidilme ihtiyacı belirmiştir. İhtiyacı tetikleyen unsurda vatandaşın AB müzakereleri çerçevesinde ortaya çıkan uyum sürecidir. Kamu kurumlarının vatandaşa hizmet sundukları göz önünde bulundurulduğunda ise tetikleyici bir başka unsur vatandaş memnuniyeti ve kalite odaklı hizmet ihtiyacıdır.

2003 yılının sonlarında duyulan ihtiyacı giderecek kurumsal yönetim sistemine alt yapı oluşturacak yasal düzenlemelere gidilmiştir. 5018 Sayılı Kamu Mali Yönetimi ve Kanunu ile birlikte Kamu İç Kontrol Standartları gereği her Kamu Kurumu Risk Yönetimi çalışmaları yapmak zorundadır. Proje Yönetimi, Finansal Risk Yönetimi gibi alanlarda yapılan çalışmalar ve Risk Yönetim Modelleri olmakla beraber Risk Yönetimi konusunun Kamu Kurumları için yeni bir kavram olması sebebi ile Kamu Kurumlarına özgü çalışmalar yeterli değildir. Kamu Kurumlarına yönelik geliştirilmiş bir Model bulunmamaktadır. Yapılan bu tez çalışması ile Kamu Kurumlarının bu alanda yaptıkları çalışmalara katkı sağlayabilecek bir Risk Yönetim Modeli oluşturulması hedeflenmektedir.

ABSTRACT

ENTERPRISE RISK MANAGEMENT IN PUBLIC INSTITUTIONS: AN IMPLEMENTATION IN TURKEY

With the economic crisis in the beginning of 2000s, the need for a change in institutional management systems in public institutions has come to light. The reason for this is the citizen's EU harmonization process. Considering that the public institutions provide services to citizens, another need stems as citizen satisfaction and quality focused service provision.

In the end of 2003, legal regulations are used to create an infrastructure for institutional management systems that will meet the needs. Every Public Authority must make Risk Management work by 5018 Law on Public Financial Management and Internal Control Standards. Although there are risk management studies in areas such as Project Management, Financial Risk Management, and Risk Management Models, risk management issue is a new concept for Public Institutions. Public Institutions specific training is not enough. There is not a model developed for the Public Institutions. In this thesis aimed to the creation of the Risk Management Model that can contribute to the public institutions' work in this area.

ABBREVIATIONS

COSO	Committee of Sponsoring Organizations of the Treadway Commission
INTOSAI	The International Organisation of Supreme Audit Institutions
ISO	International Organization for Standardization
IIA	International Institute of Internal Auditors
PMI	The Project Management Institute
EWRM	Enterprise-Wide Risk Management
SWOT	Strengths, Weaknesses, Opportunities, Threats
PESTE	Political, Economic, Social and Technological
UNESCO	United Nations Educational, Scientific and Cultural Organization

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1. INTRODUCTION

Mid seventies inside the capital city of the United States of America a political scandal namely Watergate occurred as a consequence of bribery, corruption and irregularities in financial reports and information. With this scandal which happens for the first time in American History, President of USA Richard Nixon resigned of his position. As a consequence of these incidents financial reformas, law reforms and laws have been entered into force to prevent bribery and corruption. Together with this as a private sector enterprise in order to examine, analyze the financial reports and to make proposals concerning fraudulent institutional financial reports Tradeway Commission have been founded in 1985. Priorily Tradeway Commission have read the financial information and reports, made examinations and proclaimed reports. As a result of the first report to review the problems and to generate and integrated internal control structure Sponsor Organizations Committee (COSO) have been founded. In September 1992, a report has been proclaimed that is comprised of four volumes by COSO namely Internal Control – Integrated Frame and this report has been amended with slight modifications and updated successively in 1994. In the beginning of the new millenium in Turkey as a result of the economical crisis and scandals, within the frame of the attempts to join European Union, Internal Control Structure has come to the Agenda and further proceedings have been initiated.

1.1. Basic Terms For Enterpriseal Risk Management

It is not possible to mention on a unique Risk definition that is accepted in literature. Different disciplines shall define risk in different ways.

On a basic meaning risk is an activity or the indefinitive state related to an events' result (Terje and Ortwin, 2010:8). Risk, is more than a simple estimation, is an important cause that shall lead to more negative results (Reding, vd., 2009: 4-3). Since risks are related to negative results "risk" and "problem" concepts are mixed. While problem exists and a situation to be solved, to think the risk as a "potential problem" is more correct. On a case that there is no uncertainty it is not possible to talk about risk. That's why risk is an expression used not for the existing situations but for threads to possibly happen in the future (Derici, Tüysüz ve Sarı, 2007: 152). Uncertainty is not always a source of risk. At the same time risk can form opportunities (INTOSAI) The Risk is defined within ISO (International Organization for Standardization) 31000 as "the influence of uncertainty on targets". COSO (The Committee of Sponsoring Organizations) defines risk as "an event that may possibly lead to negative results". After the definition of IAA (International Internal Auditors Institute) risk is "the possibility of occurrence of every type of events that shall prevent the strategic, financial and operational targets of the enterprise". PMI (Project Management Institute) defines risk as "an uncertain even or condition that have positive and negative results on the enterprise on the condition that it occurs". According to a mathematical definition risk is: the multiplication of the magnitudes of loss or profits' realization probability (Jaafari, 2001). From the perspective of Administrative Sciences risk is stated as the uncertainty in plan and decision results and it is mentioned to be inevitable and is a function of strategic results (Burnaby ve Hass, 2009: 540). Risk is the behaviors and happenings to prevent the applied strategies to be unsuccessful while enterprise strategic targets are to be realized (Demirbaş, 2005, p. 177). That's why risk arises from the strategies that the enterprise applies and on the lack of strategy it shall not be expressed about risk (Sobel, a.g.e, p.1.03.).

If risk can be considered from the perspective of its source basically it is presumed internal or external sourced event or situation that the enterprises reaching of its targets successfully or unsuccessfully. (COSO, 2004a: 16).

From the perspective of internal control system risk is stated as every type of situations or conditions that may prevent the enterprise to reach its aims and targets. Risk consists of three components. These are; scenario, possibility to occur and influence dimension on the condition that it occurs (Sobel, a.g.e, s.1.03.).

Scenario dimension, apart from focusing on the risks causes and risks to arise, it is also analyzing the occurrence probability of more than one risk, and developing scenarios and generating controlling methods against these situations.

Probability of occurrence dimension expresses the time period of a proper event for the realization. (Republic of Turkey Ministry of Finance, Budget and Financial Control General Directorate Financial Management and Control Department, July – December, 2008)

Influence dimension is the influence degree on the ability of the enterprise of realization of individual purposes. (Republic of Turkey Ministry of Finance, Budget and Financial Control General Directorate Financial Management and Control Department, July – December, 2008)

1.1.1. Risk Categories

Risks can be classified in multi ways. Basically according to its source risks can be categorized as internal, external and both internal and external sourced risks. Figure 1 and on Table 1 risk categories are presented and explained in details.

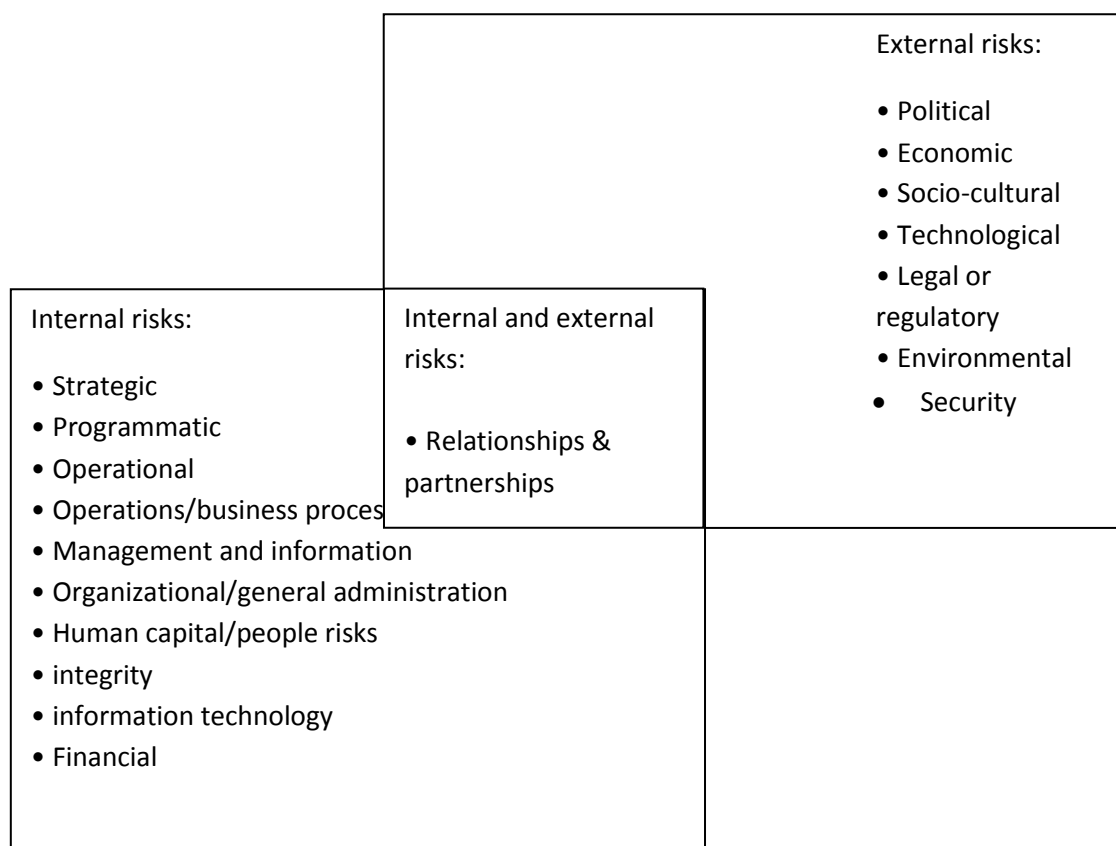


Figure 1 Risk Categories According to Their Sources (COSO, 2004a: 16).

Table 1 Risk Categories (COSO, 2004a: 16).

Risk category	Illustration / issues to consider
External (arising from the external environment, not wholly within UNESCO's control, but where action can be taken to mitigate the risk)	
Political	Change of government/policy in Member States, political instability
Economic	Decrease or zero-growth of UNESCO's budget (regular programme and extra-budgetary funds) Fluctuation of exchange rates Effect of global economy on UNESCO activities

Table 1 Risk Categories (continued)

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
Internal (arising from within the Organization)	
Risk category	Illustration / issues to consider
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 Programme outside the scope of UNESCO or Not within the framework set out in the C/4 and C/5 documents

Table 1 Risk Categories (continued)

Risk category	Illustration / issues to consider
Operational	All risks relating to existing operations – both Current delivery and building and maintaining Capacity and capability Failure to deliver the service to the user within agreed / set terms Failure to deliver on time / budget / specification
Operations / business process	Inadequate project management Lack of forward planning
Management and information	Unsatisfactory communication among parties involved Lack of leadership from responsible officers Unclear distribution of staff responsibilities
Organizational / general administration	Heavy bureaucratic procedures and lack of Flexibility leading to time delays Division of common budget earmarked for On theme / field of activity Between several teams / sectors reduces delivery Possibilities and ability for effective follow-up
Human capital / people risks	HR (staff capacity / skills / recruitment) Ability to attract and retain qualified staff Loss of institutional memory if short-term staff are not retained or with the use of consultants Reputational risk due to questionable / discriminatory employment policies

Table 1 Risk Categories (continued)

Risk category	Illustration / issues to consider
Integrity	Risks relating to regularity and propriety / Compliance with relevant requirements / ethical considerations Corruption and fraud
Information technology	Reliability of information used for project management / monitoring Risks linked to information (inadequate information preventing sound decision making, lack of privacy and data protection, unreliable or inadequate databases and IT technology)
Internal and External (arising from both 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 budget frame

1.1.2. Risk Management

For the enterprise to realize its strategic aims and targets and to realize its strategies in a proper way, the possible risks to be confronted need to be determined, and then the identified risks need to be evaluated and analyzed and finally necessary precautions shall be taken against these risks. Source of risks have already been defined as uncertain situations and at the same time it has also been mentioned that uncertainty involves also opportunities. That's why risk management is the attempt to minimize the influences of uncertain events (Günes, 2006). It can also be defined as the reducing of the risks that prevent the application of strategies correctly that leads the enterprise to reach its aims and targets and also extracting the opportunities the success (Reding, and others., 2009: 4-3). Risk Management shall be expressed as a strategic period that supplies the enterprise to get correct decisions with institutional functions among risks and opportunities. It provides that enterprise to take risks as much as it carries or it can stand against and it supplies a high level development (Gartner2008). Thus, while risks negative results of uncertainty and influences are reduced, it provides that opportunities to be extracted and used.

Risk management is an important function of enterprise management. The role of this function in enterprise management: is to identify the risk management strategy and policies, provide risk management in strategic and operational level, generating risk culture, coordinating educations and trainings towards this direction, generating risk policy and structures towards working units, designing processes of reviewing them for risk management, coordinating the risk management on improving activities, improving risk perspectives including work sustainability programs and emergencies and board of directors and shareholders prepare reports. (A Risk Management Standard, 2002: 11).

Risk management have been defined as reducing the risks that prevent the application of strategies correctly that leads the enterprise to reach its aims and targets and also extracting the opportunities the success (Reding, and others., 2009: 4-3). To supply the sustainability of the period it is a perquisite that the activites on Figure 2 shall be monitored.

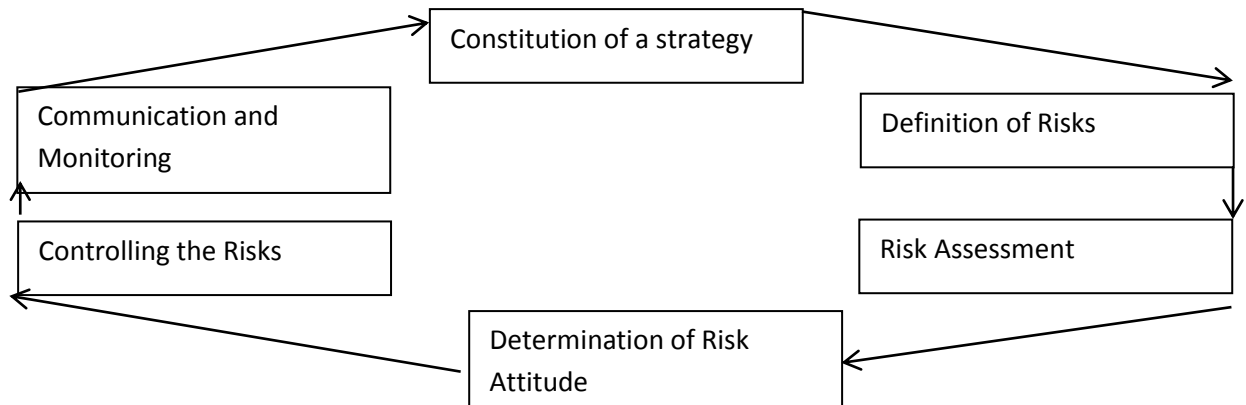


Figure 2 Sustainability of Risk Management Process

(Shenkir and Walker, 2007: 2.)

Characteristics of Risk Management: (Riskactive, 2008; Deloitte, 2001);

- a) Risk Management shall be integrated to company strategic management and planning proceedings.
- b) Common purposes of risk management shall be identified in enterprise general and with the participation of the whole staff.
- c) Risk Management shall be protective and shall produce the correct results.
- d) Main subject that the Risk Management focuses is to limit the risk hunger in an objective way that institutions are subjected to or undertake.
- e) Everyone inside the enterprise are responsible of the risk management. Enterpriseal risk management is a team work and and a process that interests the entire staff.
- f) It is an obligation that inside the enterprise every managers and staffs' duties, authorizations and language of risk management shall be generated within the enterprise. For responsibilities shall be defined in details. A common generation of risk management consciousness and common language a risk management policy shall be formed and risk management training shall be made with practice.
- g) The key of successful application of risk management is the consciousness of the superior managements' against risk management functions and benefits of application. A powerful risk organization shall be founded.

Reasons of the necessity of Risk Management (Saka, 2006; Ugurel, 2008):

- a) The continuity of the services with its main service areas and its existence
- b) The necessity of minimization of uncertainties and the necessity of reducing the losses,
- c) Improving the risk frequency arising from the rapid change of internal and external environmental conditions
- d) The necessity to produce sustainable services,
- e) The necessity of generating a social responsibility regarding accountability and transparency principles,
- f) Convenience with the legal arrangements,

The purpose of Risk Management on the condition that for the events that has possibility to harm the enterprise in the future and on the condition that the event happen is to minimize the negative results, to increase the awareness towards the risk management results and coordinating the target oriented processes. (Manab, Hussin and Kassim, 2007: 2; Griffiths, 2005: 21).

The purpose of the risk management enable the administration to consider uncertainty and related risks and opportunities in an effective way, strengthening the value creation capacity, presenting more effective services considering the values as equality and justice in a more effective and economic way. (Republic of Turkey Ministry of Finance Budget and Finance Control General Directorate Financial Management and Control Department, July-December, 2008)

Main purposes of Risk Management shall be ordered in such a way (Günes, 2006):

- a) Supplying the managers to think in a free way,
- b) Minimizing the expenses and increasing the incomes,
- c) Supplying consistency in incomes,
- d) Providing sustainability for the given services,
- e) Possessing sustainable improvement opportunities,
- f) Realizing the social responsibility
- g) Protection of respect

1.1.3. Transition from Traditional to Enterpriseal Risk Management

In traditional risk management concept in functional structure for superior management is dominant as a controlling tool. While risk is defined as negative states, it is mostly financial control based and reduces the risks and protects the enterpriseal value. In actual risk perspective enterprise is considered as a whole and used by managers as a tool of management. It is considered as risks involve within also opportunities. Apart from protecting the institution via Risk Management it is beneficial to add value to institution as well. On Table 2 it has been mentioned on which direction the changing occurs during the transition of Traditional Risk Management to Actual Risk Management.

Table 2 : Transition from Traditional Risk Management to Enterpriseal Risk Management

(PWC, 2006;Kazmirci and Altunay, 2004; Protiviti, 2006a).

Traditional Approach	Modern Approach
Risk is a negative factor to be controlled.	Risk is an opportunity
Risk is managed in an organizational way	Risk is managed as a whole in enterprise scale with integrity
Responsibility of Risk Management is delegated in low levels	Risk is everyones' responsibility
Risk measurement is subjective.	Risk is measurable
There are unstructured and inconsistent risk management functions	Risk Management is founded to all enterprise management systems
There is an internal auditing to control the superior management.	There are Monitoring and Assessment Council and Internal Auditing Unit for the superior Management to execute an effective Risk Management

Table 2 :Transition from Traditional Risk Management to Enterpriseal Risk Management(Continued)

Traditional Approach	Modern Approach
It is mostly financial control.	It is mostly strategic
Risk reducing is provided	Risk optimization is provided
Risk limits exist	Risk strategy exists
Risk measurement is unplanned	Risk measurement and monitorin is planned
To save the Enterprise value is essential.	To add value and protection is essential

1.1.4. Enterpriseal Risk Management

Enterpriseal Risk Management is generated through defining potential events to influence the company, managing the risks according to the capacity of taking risks of the company and reaching the company to get its targets, confidentiality of financial reporting, providing security in a proper level related with the proper purposes of laws and regulations that shall be effective and applicable, is affected by the board of directors, managers and all other employees, involving the internal control within a proper strategy covering the entire applied operation is a systematic process (COSO, 2004).

Another definition is that taken into consideration in strategic determination, applied in every unit and layer in organization, and aims to realize the capacity of the purposes of the organization (Republic of Turkey, Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July – December, 2008).

Starting point of the enterprise risk management is the determination of enterpriseal mission and vision. Management determines the strategic purposes within the frame of mission, chooses the strategies to provide reaching the purposes (INTOSAI, 2007: 10).

Enterpriseal risk managements' main purpose is to add value to the enterprise. This is a dynamic, discipline, sustainable and proactive system that provides the strategies, technologies, to assess and manage uncertainties that prevent this purpose to be realized.

While adding value is to be realized within the enterprise, main drivers in Figure 4 are used (Manab, Hussin and Kassim, 2007: 2).

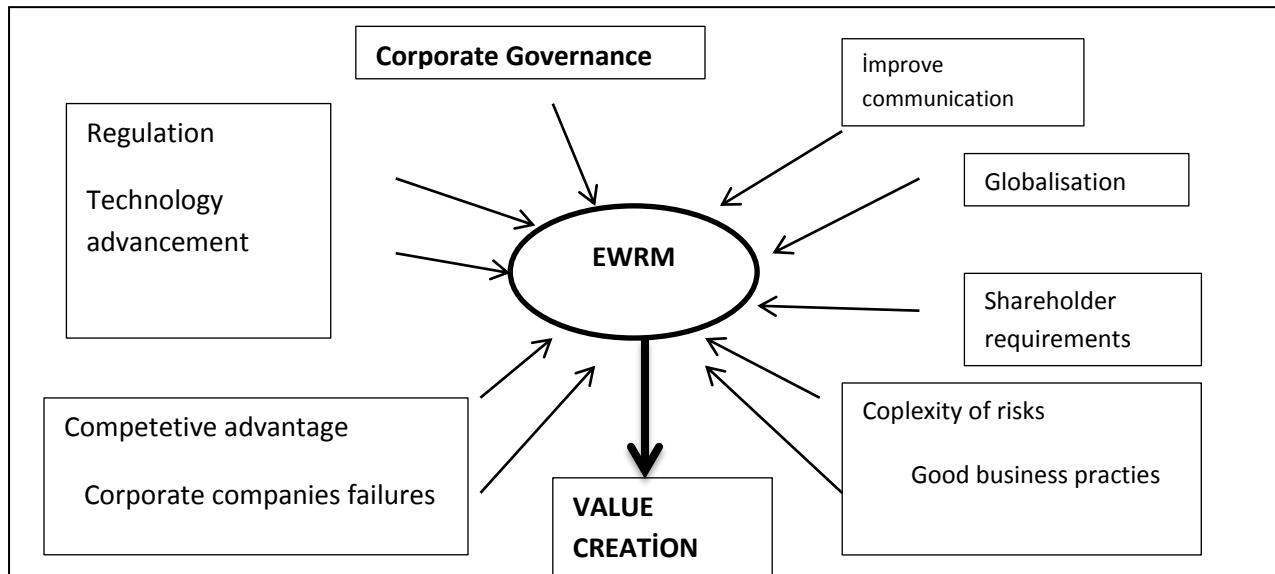


Figure 3 Drivers of Enterprise Risk Management

(Manab, Hussin and Kassim, 2007: 2).

Enterpriseal Risk Management (PWC, 2006; Pagach and Warr, 2007; TÜSAD,2008a).

- a) Existence of risk strategy and risk culture,
- b) Existence of responsible on enterprise and unit basis,
- c) Considering the purposes of the Organization,
- d) In order to reach the aims and targets necessary risks shall be taken, and precautions shall be taken against unaccepted risks
- e) Improves the skills of managing the uncertainties that arise in organizations and determines the risks and probability of risks and their affects to succeed in realizing the targets
- f) A dynamic process that is not limited to a single event and situation, well distributed to time and source of organization and diffuses into work flows,
- g) One element influences the other, follows a proper order not as a single process, systematic, repeatable and auditable,
- h) Provides the responsibility of every level staff,
 - a) While bringing the enterprise to a prepared state according to the risk hunger, orders the risk hunger and strategies according to privileges,

- b) Provides the application of controlling activities that shall be developed against risks,
- c) Provides the improving of controlling activities against risks according to cost benefit analysis,
- d) Providing the benefit of opportunities,
- e) Provides the determination of risks and management of risks among units,
- f) Existence of a proper internal controlling structure that audits the enterpriseal risk management,
- g) Proactive management of all sorts of risks influences' in a way that it influences the enterprise,
- h) Existence of superior management responsibility and its support,
- i) Performance focused and effective in all sorts of operational work processes,
- j) Works in an integrated way with the strategic management and plan,
- k) Monitoring of enterpriseal risk management period and providing the assessment,

In a structure that no unnecessary work load is generated

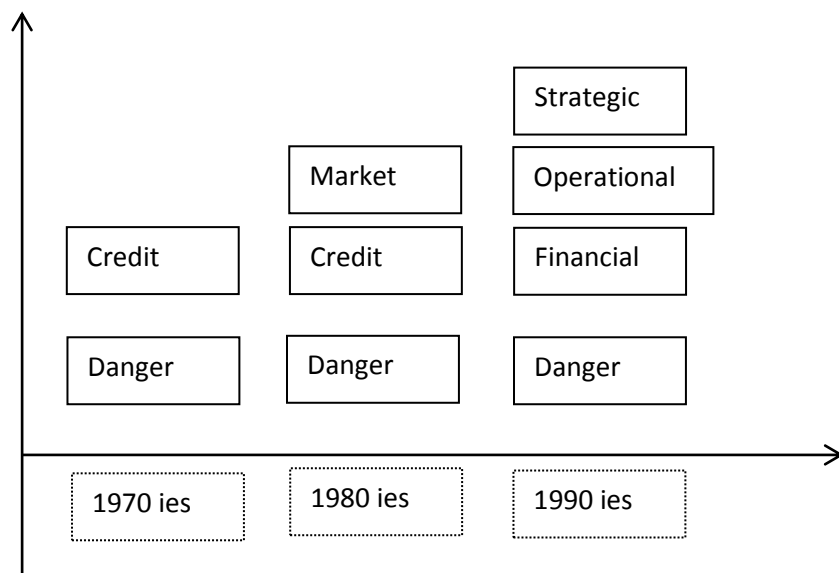


Figure 4 : Historical Improvement of Enterprise Risk Management (Shenkir and Walker, 2002).

Enterpriseal Risk Management Scope and Frame, generation of enterprise value and sustainability it considers the risks and opportunities that influences the determined

reaching strategic purpose and targets. It provides the enterprise risks evaluation within the frame of strategy and extraction of the risk profile (Thorton, 2003). As mentioned before enterprise risk management does not involve only predicting the risks preliminarily and manage them but also within the frame of enterprise risk strategy determination of opportunities and evaluating them (Republic of Turkey, Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July – December, 2008)

Benefits of enterprise risk management shall be classified under 3 headers; increasing the enterprise performance, optimization of risk management costs, providing the competition advantages (COSO, 2004).

Enterprise value influences of enterprise risk management:(COSO, Enterprise Risk Management –Integrated Framework Application Techniques (September 2004), p.34.)

Increasing the enterprise performance:

- a) It develops the state to be ready for the changing,
- b) It reduces the operational loss and surprises,
- c) It improves the convenience to arrangements and risk answers,
- d) Uncertainties about performance targets are predicted and delivered,
- e) It provides the risks to be understood about profit and capital,
- f) It provides the trust to systematic risk assessment

It optimizes the Risk Management Costs:

- a) It avoids extra and unnecessary activities,
- b) It combines the risk answer decisions,
- c) It arranges the risk process costs,
- d) It determines the risk hunger and tolerance.

It provides competitive advantages:

- a) It controls the risk management through work planning and strategic improvement,
- b) It applies more robust and correct risk management,
- c) It provides the management of all risks among the enterprise,
- a) It improves the supplying of capital and resource,
- b) It structures the risk taking according to individual skills,

c) It protects the brand image and product.

1.1.5. COSO Enterprise Risk Management Model

There are many application models in the world within the frame of Enterprise Risk Management. While the purposes of these enterprise risk models are same their methods and processes are different. Basically they all improved through ISO 31000 standards. The most commonly applied Risk Management Models are Australia and New Zealand Risk Management Systems, United Kingdom Risk Management System, Canada Risk Management System and USA Risk Management System.

Among the enterprise Risk Management models most widely used and known models is USA Risk Management Model that is developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 1992 and updated in 2002 and gets its actual state. (Arthur J. Gallagher Risk Management Services, 2009:20-21)

COSO Enterprise Risk Management Model and similar other models goes to far from the classical risk management systems and via stating the enterprise potential risks and opportunities, with the purpose to clarify and minimize risks and maximize the opportunities via forming internal controls (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

COSO enterprise risk management system is a process of generating strategies and application among the institution, determination of the events with the probability of influencing the enterprise, management of risks within the frame of risk hunger and influence by enterprise board of directors, management and other staff that supports the enterprise to reach its targets.

Enterprise Risk Management Model that is presented on Figure 5 summarizes the enterprise risk management steps on target and unit basis.

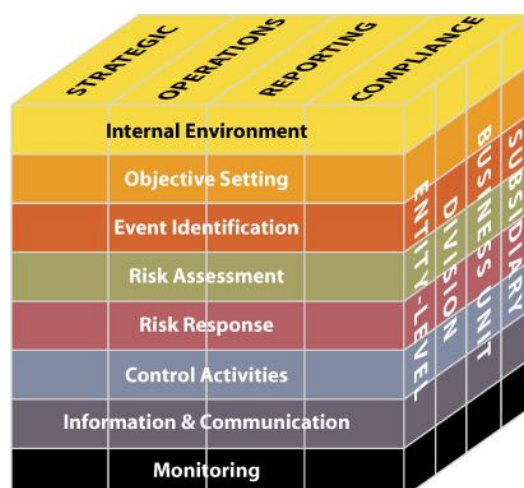


Figure 5 COSO Enterprise Risk Management Model (COSO, 2004a: 16).

COSO enterprise risk management model consists of 8 elements as internal environment, objective setting, event identification, risk assessment, risk response, control activities, information & communication and monitoring. Table 3 presents the activities within the frame of these elements. After all, all elements have been explained in details.

Table 3 Enterprise Risk Management Elements (COSO, 2004a: 16).

Internal Environment Risk Management Philosophy – Risk Appetite – Board of Directors – IntegrityandEthicalValues– CommitmenttoCompetence –OrganizationalStructure – Assignment of AuthorityandResponsibility – Human Resource Standards
ObjectiveSetting Strategic Objectives – RelatedObjectives – SelectedObjectives – Risk Appetite – Risk Tolerances
EventIdentification Events – InfluencingFactors – EventIdentificationTechniques – EventInterdependencies – EventCategories – DistinguishingRisksandOpportunities
Risk Assessment InherentandResidual Risk – EstablishingLikelihoodandImpact – Data Sources – AssessmentTechniques – EventRelationships

Table 3 Enterprise Risk Management Elements(Continue)

Risk Response EvaluatingPossibleResponses – SelectedResponses – Portfolio View
Control Activities Integration with Risk Response – Types of Control Activities – Policies and Procedures –Control sover Information Systems – Entity Specific
Information and Communication Information – Communication
Monitoring Ongoing Monitoring Activities – Separate Evaluations – Reporting Deficiencies

1.1.5.1. Enterprise Risk Management Model Elements

Control Setting; It is the foundation to enterprise risk managements’ other elements. Enterprises’ risk management philosophy, risk hunger, monitoring and assessments monitoring, honesty and ethical values, staff experience and management authorizations, distribution and organization of the staff and type of improvement are among interior factors.

(Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

A enterprises risk management philosophy is a common attitude of the assessment of risk from detection of enterprises strategy and daily operational activities. It is the acceptable difference level of risk tolerance with the purpose and targets’ of realization(Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

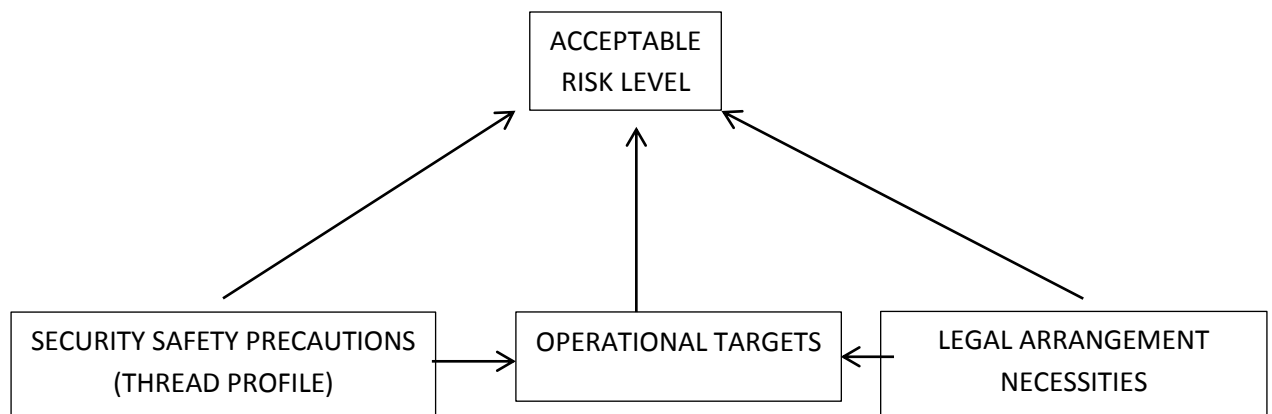


Figure 6. Element for the Risk Tolerances to be Determined

(www.merceroliverwyman.com (2005).)

Risk hunger is an acceptable risk level to reach the enterprises aims and targets. At any time interval in the direction of Administrative authorities' mission, vision, aims and targets, it is the amount of risk readily to be accepted (toleration/to be subjected to/to take precaution). Risk hunger reflects the risk management philosophy.

Risk hunger can be determined qualitatively and quantitatively. Risk hunger shall be taken into consideration in the generation of risk management strategy. (Republic of Turkey Ministry of Finance Budget and Financial General Directorate Financial Management and Control Department, July – December, 2008)

- a) Risk hunger: internal and external surrounding are influenced from working systems and strategies. From this aspect, risk hunger, within the frame of enterprise risk management strategy superior management and monitoring evaluation council orientations shall be determined.
- b) For all sorts of risks on the condition to be stayed boundaries of administrations enterprise hunger it is possible to determine different hunger levels.
- c) The reason of unsucccess can be as much as taking much risks also can be because of taking less risks. Although the risk hunger is less and be considered a secure management technique, it limits the administration creativity, innovation and profiting from opportunities. (Republic of Turkey, Ministry of Finance Budget and Finance Control General Directorate Public Internal Control Guide, 2014)

Determination of purposes; Aims and targets are determined in strategic level and sub level operations, and establishes a foundation and prerequisite for the purposes related with the reports and convenience (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008). Standard number 5 that is involved in Public internal control standards statement “Administrative authorities shall generate and declare plans and programs that includes the required resources to realize their purposes, targets and indications” developed the arrangement towards the determination of the purposes of the enterprises. Within this frame determined mission definition outlines the enterprise to reach to what with main characteristics. Strategic purposes that are determined are high level targets that are parallel to enterprise mission and supports this mission. In order to realize the purposes that support mission and purposes that support the mission strategies are identified and applied. It is more dynamic than the mission and set to reflect the modifications in conditions.

Purpose definition can be classified under various titles. It can be classified as internal control and enterprise risk management basically strategic purposes and in sub levels operational, reporting and appropriateness.

Including, operational purposes, performance targets and protection of sources against losses, it is related to enterprises’ aims effectiveness and sufficiency. Within the frame of accounts to be reported to the publicity “protection of resources/assets” definition shall be extended to in such a way: prevention of public funds defalcated or disclosed or edited. It shall reflect an environment that the enterprise is active within the frame of operational purposes.

Since there are focuses for the management of resources that possess operational purposes, if operational purposes are not clear and are not understood in a better way, these resources may not be managed properly.

The purposes related to reporting are connected to the confidentiality of reporting they may involve both financial and non-financial data. Despite the fact that purposes related to reporting are related to the information formed by the third parties main purpose of the secure reporting is to provide the administrative authority appropriate information

convenient, correct and complete to target. Taking right decisions without correct and complete information is quite difficult for the management.

Purposes related to appropriateness are the purposes related to laws and regulations. There can be rules related to market, environment, wealth of employees and similar conditions. It may be necessary for some enterprises that possess international appropriateness. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Table 4 Risk Categories (Kazmirci and Altunay, 2004; TÜSAD, 2008a ; Apgar, 2006; Rassumen 2006; Riskactive 2008).

RISK CATEGORIES					
FINANCIAL	Market	Kredi	Liquidity	Rerporting	Capital Structure
	Profit	Default	Payment	Budget planning	Capital
	Interest	Exchange	Warrant	Taxation	Debt
	Price	Warrant	Cash Flow	Investment Assessment	Asset/Debt Balance
	Financial Instrument	Debting Cost	Concentration		Hedging/Derivation risk
	Inflation	Product development	Cash Flow		
OPERATIONAL	Process	Technology	Work Operations	Product Market	Culture&Asset
	Product development	Confidentiality/Integrity	Machine/Equipment Problems	Customer loss	Labels&Reputation

Table 4 Risk Categories (continue)(Kazmirci and Altunay, 2004; TÜSAD, 2008a ; Apgar, 2006; Rassumen 2006; Riskactive 2008)

	Customer prediction	Related knowledge	Deficient products	Demand development	Education
	Human Resources	System accessibility	Raw material/ Input problem	Competition increasing	Intellectual capital
	Customer prediction		Strike	Product Quality Security	Company harmony & Ethics
	Project risks		Word deduction		
ENVIRONMENT	External Environment				Regulation
	Geopolitical	Disaster	Country risk	External Source Relations	Work Law Amendments
	Legal	Crisis	Corruption	Working Place Health and Security	Taxation Law Amendments
	Competitors	Industry	International Trade		Environment Law Amendments
	Customer requests	Law	Technological Innovations		Sector Regulation Changes

Definition of events; Enterprise shall be isolated from the risks that prevent applying strategy successfully and realization skills to reach purposes. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Events are internal or external sourced incidents and occurrences of influence the realization of purposes and application of strategies. Events may have positive or negative or both positive and negative affects (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Management events shall understand the basic categories of the internal and external factors. External factors; especially, are the factors arising from political, social and technologic environmental changes and economic factors that influence the enterprise and suppliers. Internal factors do arise from the choices related with the proceeding style of the management. Internal factors, enterprise infrastructure, the activity of enterprise in different locations, staff skills and expertise, and the way enterprise information systems are functioning. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Techniques that are focused on past events, annual reports and accounts, explanations related to mistaken payments shall evaluate the elements as internal reports. Techniques focusing on future shall be interested in population change, actual market conditions and amendments in political environment. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Table 5: Risk Determination Techniques Samples (COSO, 2004a: 16).

Techniques of Risk Determination – Samples	
Individual Assessments and other Application Works	Works that research work processes, factors defining internal and external factors
Negotiations and interviews	Industrial comparing
Questionnaires	Scenario Analysis
Brain storming groups	Risk assessment-analysis works
Event investigation	Auditing and investigation
Risk consultants	Danger & Operating works
Process Mapping	Value Chain analysis
Control lists	Work process analysis
SWOT analysis	Flow charts

Assessment of Risks; Assessment of risks gives the opportunity to the enterprise to evaluate how much potential events have influences on the purposes to get realized. Through profiting from the combination of techniques from two perspectives – influence and likelihood shall be evaluated. Likelihood, is the possibility of an event to occur in a proper period of time, and impact is the effect degree of a enterprise to realize its individual purposes. Risk evaluation methodology can be qualitative and quantitative; it may depend on objective and subjective methods. If subjecting to the risk to the enterprise shall not be accepted within the frame of the risk hunger, risk shall be classified as “high priority” or “key risk”. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

The influence in here, while expressing the significance degree on the realization of risk organization purposes; likelihood, describes the realization possibility of risk in a proper period of time (Dinapoli, 2009, p. 13).

After the influence of risk and the occurrence possibility have been calculated, risk capacity that an organization shall undertake is identified. Here again it is important that superior management shall lead to the manager among the managers in organization related to the acceptable and unwanted internal organizational risks (Dinapoli, 2009, p. 14). Acceptable risk levels for all types of organizations can be different (Intosai 2004, p. 25).

Table 6 Risk Analysis Techniques Samples (COSO,2006).

Risk Analysis Methods and Techniques –Samples	
Market Research	Research and Development
Work Effect Analysis	Observations
Modeling dependency	GZFT analysis
Event tree analysis	Work sustainability planning
Danger Analysis	Real option modeling
Making decisions while taking Risks& uncertainty	Statistical assumptions
Central distribution and inclination measurements	PESTE analysis
Error tree analysis	Error Mode & Effect analysis - HMEA

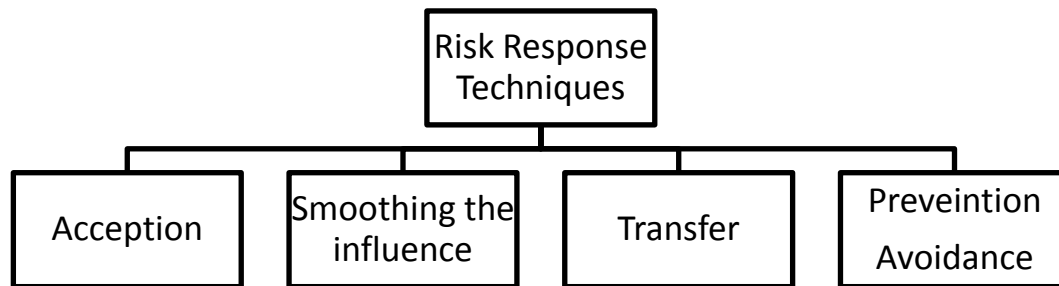


Figure 7 Risk Response Techniques

Risk Response; After evaluating the related risk management decides how to react against this risk.

Among the acception forms of responding against the defined risks are acception of risks, smoothing the risk effects, prevention and avoidance and risk transfer methods.

Sharing/Risk Transfer – minimizing the influence of risk possibility and transferring the part of the risk. This can be done via classical insurance way or making a payment to the third party via undertaking the risk in a different manner. Especially the service is provided externally (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

Transferring the activity partially or entirely to some other enterprise that possess expertise.

- a) Transferring the execution of activity to third parties via tendering.
- b) Via using insurance method transferring the risk (if appropriate). (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Reducing/Improving the Risk – Most of the risks are solved in this way. Necessary precautions are taken to minimize the risk possibility or effect or both.

- a) Preventive controls
- b) Orienting controls

c) Detective controls

Corrective controls will be given in details in control activities part (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Prevention/Finishing the activities – In such a response activities that lead to risk shall be finished.

Acceptation / Standing- No precautions are taken to minimize the risk possibility and risk effect. This response makes the assumption that no effective method is identified to reduce to influence or possibility to an acceptable level or individual risk is already considered in an acceptable level. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Under below conditions risk can be accepted;

Natural risk is accepted if it is inside the boundaries of risk hunger.

- a) On the case that risk is not acceptable the cost of the precautions to be taken (controlling, transferring or avoidance), is accepted if it is understood that the effect that a risk shall make is bigger.
- b) Some kind of risks are out of the control of the management. Some risks as long as the activity is not finalized do exist and to finalize the activity is not always possible and not wanted as well (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Control activities are the integration of procedures that grant the responses of management against risks are applied. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Preventive controls are designed regarding the limitation of risk development and realization of unwanted results possibility.

For instance; preliminary financial works, application of segregation principle to prevent corruption and inappropriateness (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Orienting controls are designed to provide a proper result.

For example; training against protection for danger, using protective equipments and tools (mask, special dresses etc), preventive health applications (informing the people about washing their hands when epidemic diseases exists, publishing the flyers to present the disease etc) (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Disclosing control “after the event” aim to identify whether unexpected results occur or not.

For example; in proper periods or in irregular intervals cash counting, works to be executed with tender a good to be bought within the frame of the contract detection that it is not bought properly (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Corrective controls aim to correct unwanted and unexpected results. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008)

For example; putting clauses with provisions for charging meaningless payments in contracts, foresee the guaranty period. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Within this frame results shall be evaluated according to adjusted risks and thus risk management applications results are required to be identified to show how much operational results are reflected (TÜSAD, 2008a).

While control activities are identified below are the factors to be considered

Control activities;

- a) Are to be executed by who/which units
- b) Aimed completion dates

- d) Necessary resources for application
- e) Critical success factors
- f) How they are to be documented

Periods according to monitoring shall be identified priorily (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Methods of Control Activities:

Taking decisions and approval; Making decisions in activities and approval authorities shall be determined obviously and in a written form. Taking decisions and approval shall only be made by the authorized people. Observation of the authorization order shall perquisite to behave within the boundaries of the regulations and enterprise in the direction of orders. Authorization procedures shall involve specific conditions and proper authorization transfers in proper activities of managers to employees.

Segregation of duties; Managers, in order to minimize error, inappropriateness, breaching and the risk if these not to be detected shall perquisite for a process, period or activities approval, application, archiving and controlling stages shall be executed within the frame of various employees. In Administrative authorities that possess less staff it is hard to apply this segregation. Under such circumstances, management thinks about the possibility of association of so-called stages, can adjust this situation by the rotation of the employees of the operation of these control mechanisms or by the rotation of duties or with additional management controls. Thus, the risk of a single person takes the control of a risk process for a long time of the activity from many aspects of the activity is minimized.

Double Signature Method; Double signature system is applied towards providing the accuracy in documents. Double signature method can be applied before financial liabilities happened as information that shall be issued to the superior manager (reports, information notes, statistics etc.), assigning orders in non financial periods and execution of payment (payment order etc.) Through this especially in financial processes it is provided that the accountant is aware of liabilities and payments in financial processes and it is provided that accountant transactions proceed correctly. Double signature system grants the activities have been executed by the authorities.

Double signature method is a procedure to supply the data inside the document are accurate. Double signature method means that some information and proofs produced by the administrative authority are undertaken with common responsibility. Board of Directors conclusion where duties and responsibilities are shared at the same time, and applications as tender commission conclusions and protocols etc. and administrative authorities in the direction of their similar applications may apply in different fields.

Data Commitment; For the fact that consistency is to be provided different document and source based data are required to be matched. For example, bank accounts and related account inputs commitment with the correspondent bank receipts; matching of invoice information with the information on portable transaction voucher etc.

Observation procedures; related to duty assignment and execution shall be applied by the managers in regular periods. If managers assign their duties to others, their individual responsibilities can not be avoided in execution of duties. Managers, in order to the fact that duties are understood in an exact way while they are executed and in order to the fact that corruptions and errors are prevented giving the staff the necessary instructions, and they shall execute the necessary orientation and controls. Managers shall execute these procedures to be sure of the given targets are done in a proper way.

Preliminary financial controls; are the controls related with financial conclusions of administrations income, expense, asset and liabilities; convenience with administrations budget, budget arrangement, usable payment amount, expense program, financing program, central management budget law and other financial regulations provisions and they provide the effective, economic and beneficial use of sources in expence units.

The purpose of preliminary Financial Control is the convenience of conclusion/precautions of managers and realized financial activities with regulations and budget and granting the insurance about the effective usage of resources (See: Terms and Conditions according to the Internal Control and Preliminary Financial Control).

Procedures about the Accounting Proceedings ; These procedures, within the frame of principles and rules mentioned financial processes accounting on a proper date shall be provided. The purpose of these procedures is to support correct decisions in subjects that shall arise financial results. (See: General Management Accounting Regulation)

Procedures about Struggle against Corruption; Administrative authorities shall denounce administrative weaknesses corruption and irregularities, shall declare the written rules and procedures for review, detect and reporting. Struggle against corruption shall include the following procedures:

- a) Preventive controls;
- b) A system that enables to detect and report the corruptions and irregularities;
- c) Denunciation procedures (See. Information Communication Department)
- d) Procedures related with reporting the activities regarding irregularities towards non-enterprise authorities.

Access to Assets and Information;Managers shall provide the authorization for reaching of responsible persons usage and/or information and asset protection.

Limitation to reaching the assets reduces the risk of usage of these in a wrong way and not compatible with the purposes and protects the enterprise against losses. Limitation levels depend on the sensitivity of assets and information and wrong usage and loss risk. While determining the sensitivity of assets managers take into consideration values, portability and converting into cash capability.

Documenting the information, Archiving and Storage; To support the right decisions are to be taken by the Administrative Authority and process control documenting, archiving and storage shall be established. Documentation is the generation of written proofs of the executed transactions, taken decisions and the events that occur. Documentation shall be complete, correct and on time.

Documentation procedures shall provide who did what and how and when and as a result type of the documents disclosed shall state the type of information and purpose all types of the document, action and period in the enterprise. According to the terminology accepted by the European Commission, this is executed by the auditing trace. Generation of auditing trace;

- a) Provides transparency,
- b) Monitoring of the processes in enterprise from the start to the beginning,
- c) Helps to the approval of activities or approval of transactions, application, archiving and controlling, tracing the steps.

Auditing trace, current procedure or what the processes are, who are responsible for, what type of documentations are prepared, which methods and control systems are used for information flow and type of the results presentations shall be determined. Archiving procedures shall provide the past events about the enterprise, conclusions and actions related documents are signed chronologically and systematically filing. There shall be guides defining generation, completion, usage and termination of archiving. Information storage procedures shall provide the information media (paper and/or electronic) and information content, conclusion and actions shall be reflected in a true way and without it to be modified.

Work sustainability Plans; In a case that “Daily works” are hindered, it is essential to provide the services to be sustainable and necessary precautions shall be taken. Against the risk that activities that influence the purpose and targets of the administrative authority are hindered there shall be Work Sustainability Plans.

Controlling Activities related to Information Technologies; Information Technologies (IT) require in administrations private control mechanisms that shall be identified by the managers. Mechanisms related to Information systems control, controls are classified into general controls and application controls as two groups.

General control mechanisms are mechanisms that shall be applied to all processes and that shall support these processes to be executed in a proper way. Application control mechanisms involve the procedures that are necessary to be applied by the related persons both in software products' itself and controlling different processes operations. Operation of application control mechanisms are essential. Insufficiency of general controls and application controls shall not be redeemed. Generally, general control mechanisms in information and process centers are used for reaching the information and intellectual software products to be installed and repaired. Information analysis and process centers controlling: These controls involve related (data) administrators'/operators duties and responsibilities to be determined, information to be recorded and post usage procedures, back up of computers and emergency action plans.

- a) Software controls: These are providing the information technologies to be sustainable in an integration and for operation of software application and obtaining, installation and continuous usage of necessary software products.
- b) Access controls: These controls, provides protection against not authorized access; within this frame it limits the access authorizations through permitting the users to execute the processes only with proper software products and thus responsibility separation is provided. During the generation of improvement of the system general software controls require detailed application tests and control of program convenience and all errors are whether detected or not. After the system is established, controls related to system access and system sustainability; as long as it is not authorized in a proper way enables no one will use the applications or will make modifications in applications, all necessary modifications grant the modifications are executed with the identified authorization and approval procedures.

Application control mechanisms prevents the wrong data to enter the system, it corrects the errors based on automatic procedures data form and content control and that's

why it supports the internal controls. Application control mechanisms data with the system access analysis in a synchronized way, on the condition that the errors are detected it gives continuous information and these errors are provided to be corrected instantly. Application of these two types of controls grants that information is analyzed and processed completely and in a correct way.

Evaluation of Control Activities Benefits and Costs; In order to reduce the risk affect after the determination of control activities risk responsible shall assess the control activities costs and the expected benefits. If control activities costs exceed the expected benefit this control activity shall not be preferred. For the control activities that possess cost-benefit analysis sustainability and a proper amount of cost it shall be done in written form and shall be approved in proper quantitative form and shall be approved by proper authorization layer. (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide, 2014)

Information-communication and monitoring; One should consider institutional risk management as a process rather than a series of activities made only once in an institution. While checking whether the control activities are done or not, if done, their effects on risks should also be monitored. Each year, risk definitions should be updated, evaluated and new control activities should be defined after considering current risk definitions. Besides, by determining responsible staff and activity owners of control activities, a systematic of information, communication and control system should be built on.

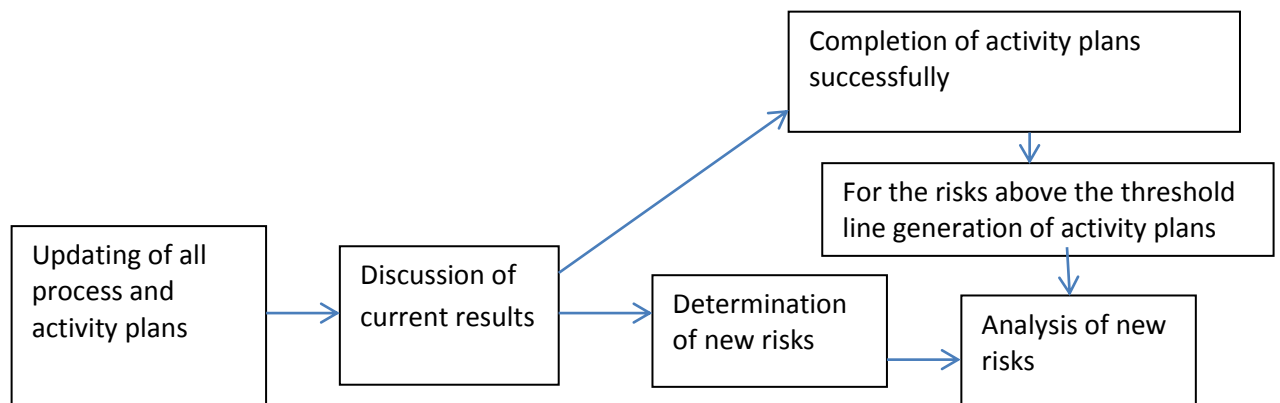


Figure 8. Components of Risk Monitoring

Preston G. Smith ve Merritt. Proactive Risk Management Controlling Uncertainty In Product Development (NewYork: Productivity Press, 2002, p.131.)

1.1.6. Roles and Responsibilities related to Enterprise Risk Management

While in an effective enterprise risk management all employees takes a role, determination, assessment and management of risks and execution of enterprise risk management systematically, consistently and in a coordinated way main responsibility belongs to the superior management (IIA, 2004).

Determination of duties and responsibilities within the administrative authority, the people knowing obviously what is expected from them within the frame of administration policy and applications, existence of horizontal and vertical communication mechanism that is appropriate to external communication is a must for a good control media. The situation that in risk management the duties and responsibilities are given to convenient, experienced and authorized people will form for the administrations' risk management a strong infrastructure. All employees are responsible for risk management with the condition that duty, authorization and responsibilities are to be defined. Figure 9 indicates the structure of risk management in administration regarding the duties and responsibilities.

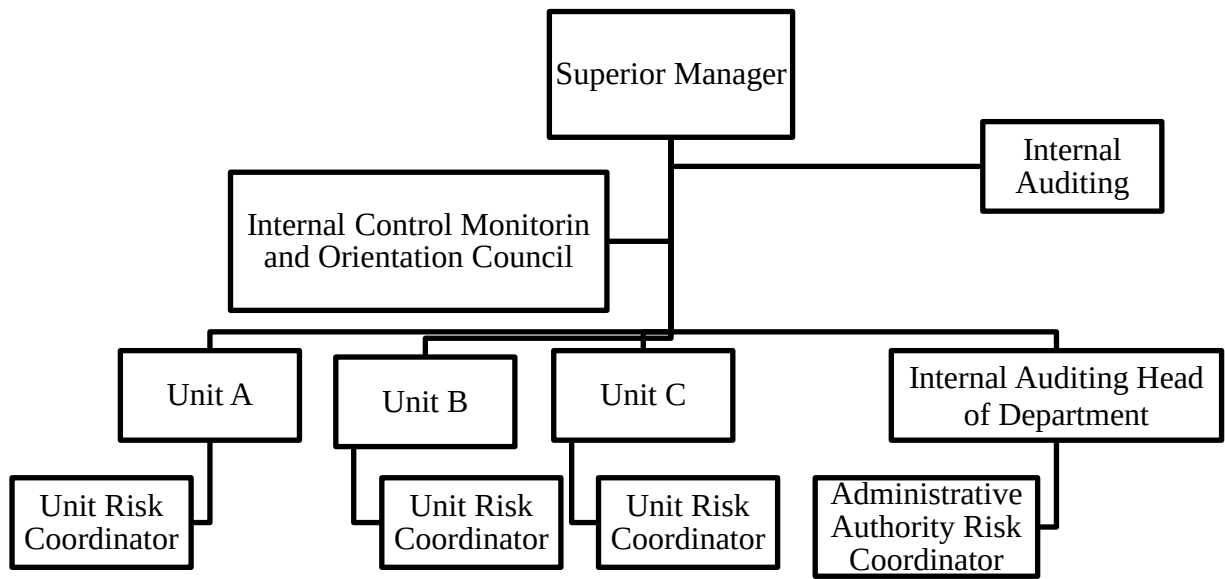


Figure 9. Risk Assessment Organization Structure

.(Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide,2014)

In public administrations targets, authorizations and responsibilities related to enterprise risk management shall be outlined within the frame of law, legal regulations and arrangements. In Public Internal Control Guide.(Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Public Internal Control Guide,2014) that is duties with harmonization in law duties, authorizations and responsibilities are outlined in details. In Figure 10 according to the organization structure this authorization and responsibilities details are given below.

Superior Manager; is defined within the frame of No: 5018 Public Financial Management and Control Law as the most superior authority and responsible in administrative authority in subject of risk management.

Superior manager in Risk Management;

- a) At the beginning of every year in the direction of administrative authorities aims and targets for the management of risks it provides a strategy to be determined and approves the Risk Strategy and Policy Document that shows how this strategy will be applied, and declares the so-called document to all employees in a written form.

- b) In RSB for risk management within the frame of this guide forms the necessary structures (like İKİYK) and determines the duties and responsibilities obviously.
- c) Before the other administrations regarding the common executed risks it provides to the Administrations Risk Coordinator (İRK) necessary support.
- d) For the management of Shareholders and risks against the publicity it provides to supply the necessary sensitivity and attendancy to generate appropriate mechanisms.
- e) By İKİYK and İRK in the direction of assessments and proposals it defines strategic actions towards the future.
- f) Regarding the Risk Management it takes guaranty from İKİYK and offers the proofs to show whether the risks are managed effectively to the Minister.
- g) Superior Manager promotes the consistency of risk management periods.
- h) It observes the Monitoring reports and effectiveness of risk management.
- i) Especially it exhibits model behavior for strategic risk management.
- j) It promotes the ones to work for risk detection.

Superior manager is leader in risk management.

Risk Observation and Assessment Council; Enterprise generates policies and procedures related to the development of risk management and offers to the approval of the superior manager and announces policies and procedures to units. İKİYK determines proper amount of risks as key risks among the presented risks that are advised by the Administrative Authority Risk Coordinator. It reports to the superior manager whether the determined key risks are managed properly in proper terms and/or when it considers that significant.

Councils' secretarial services are executed by SGB. If meetings are nexessary experts are invited from the Administrative authority or externally. İKİYK, performs the below targets as per the superior managers approval:

Concerning the risk management İKİYK;

- a) It presents through preparing Administrative Authorities Risk Strategy and Policy Document (RSB) or current RSB reviewing it and delivers for superior managers appropval.

- c) It determines policies for the generation of Administrations risk management culture.
- d) It observes the risks to be managed in enterprise in a consistent way.
- e) It determines the key risks of the administration.
- f) Risks that shall be managed belonging to expense units and policy related to these and determining the procedures and declares to İRK from the perspective of coordinating.
- g) It determines the risks to be commonly managed by other Administrative Authorities and takes the necessary precautions through declaring these to İRK for commonly management of related Administrative Authorities.
- h) İKİYK gathers at least in three month periods and evaluates whether the Administrative Authorities risk management period function properly. And it evaluates the situation and reports to the superior manager.
- i) It promotes the detection of good application samples and distribution.

Risk Management Coordination ; Management Risk Coordinator mission shall be executed by SGB manager. İRK, is a member of council and the superior management of the administrative authority is responsible for the appropriateness of the risk management periods consistency and standard against the superior manager.

İRK in Risk Management;

It is responsible for the administrative authorities all units' effective process and coordination regarding risk management.

- a) Within the frame of Risk Management at least in three months at once they call Unit Risk Coordinator (BRK) to meeting.
- b) Going out of every unit risks reported by BRK they prepare the consolidated risk report in this guide; it presents this report in three months periods to İKİYK and to superior management. With this report it reports individual assessments and the necessary significant risks to be monitored.

- a) İRK executes the councils meetings agenda, connect the meeting results to a protocol, presents the council decisions to superior manager etc.
- b) With İRK's of other Administrative Authorities they are responsible for common risks zones related subjects and the coordination of these inside the administrative authority.
- c) İRK provides technical support to units for the Administrative Authorities risk management. Via determination of units requirements in risk management reports each time before the meeting to İKİYK and to superior manager.
- d) İKİYK's perspectives, advices and decisions related to BRK's make back up and takes the necessary precautions for the administrative authority risk management periods consistency.

Unit Risk Coordinator (BRK); Unit Risk Coordinator has a grasp of expense authority units targets and internal control applications, to be chosen among appropriate management layers.

BRK's in Risk Management;

- a) It coordinates guidance and coordination for the detection of unit risks that may influence the administrative authorities targets at the beginning of the year. BRK, matches the detected risks via benefiting from sub units' knowledge and expertises with the activities and supplies all subjects to be taken into consideration. Important risks that have been taken to risk record, is reported to İRK to be presented to evaluation of İKİYK.
- b) It reviews the annually determined risk records and related reports in periods that shall be identified by the administrative authority (monthly, 3 months) and reports to İRK.
- c) It monitors the sub unit risk coordinators (ARK) managed and reported risks at unit level. It reports the modifications in current risks and if exists via evaluating new risks through getting the view of unit manager and report to İRK.
- d) Annually, offers the proofs whether they are managed in a proper way previously determined or actual risks to arise within the year to İKİYK.

- a) In the direction of İRK and İKİYK's perspectives, advices and decisions they provide feed back to ARK's.
- b) It detects the training tools related within the unit concerning risk management.

Employees; The most important element of Risk management is that the employees owe the risk management. Thus, every employee, within their working zones are responsible for the management of risks (detection of risks, assessment, response, monitoring and reporting of risks).

The ones to work in the field of Risk management;

- a) Through defining, delivering, and responding the currently arising and changing risks they shall supply support to units in risk management periods.
- b) They manage the risks in their own target zones within the frame of the duties and responsibilities that shall be determined by the administrative authority.
- c) They provide necessary proofs about the risks are whether managed well within the duty zones to ARK; if ARK does not exist they provide BRK the necessary proofs.
- d) Employees does not hesitate to deliver risks to the related risk coordinator to detect the risks.

Internal auditor; control whether the risk management period is effective or not, reviews whether the risks are managed appropriately or not considering all the activities and offers the necessary consultancy to the superior manager regarding risk management. Internal auditor at the same time makes the guidance to whether any key risk is ignored or controlled necessarily.

Strategy Development Unit; is responsible for trainings, determination of training requirements and coordination. Also, determines the good applications in administration related to risk management, they make attempts these applications to be extended and they make guidance.

1.2.The Relationship Of Enterprise Risk Management And Enterprise Management

KRY must always be in operation managements agenda and at least periodically official risk and control reviews shall be done.(Bill Murphy and Mark Davies, “Enterprise Risk Management”, KPMG LLP (2001), p1-2)

Policies and procedures: KRY shall develop and deliver policies and procedures at every stages of the business. These policies shall be understood obviously and shall be used by the management in an effective and active way.

Connection for strategy and planning: KRY must be integrated into strategy and work planning. Performance measures shall be used to support the purposes to be succeeded.

Changing method: In order to provide convenience to changing risks among the operation flexibility is essential. Mechanisms shall be established to identify changes and for to struggle resistantly.

Risk and controlling environment: Strong and open risk and controlling environment is focused on value creation and leads to decision making consciously and makes it robust.

1.2.1. Relationship Between Strategic Management and Enterprise Risk Management

Strategic management is completion of an operation of aims and targets’ definition and using its sources to reach these purposes. (Rainer Feurer and Kazem Chaharbaghi, 1995, p.11.). Strategic planning is a process where a company realizes its sources and strategies to reach the future it planned. Strategic management discloses the strong and weak sides of the business, and provides the opportunities and threads to be evaluated. (Thomas L. Wheelen and David Hunger, 1995, p.5.)

Basically risk is the uncertainty according to the result of an activitiy or event (Terje and Ortwin, 2010: 8). On the condition that there is no uncertainty there is no meaning of speaking about risk. That’s why risk does not exist actually it is the expression of possible thread to realize or occur in the future (Derici, Tüysüz and Sarı, 2007: 152). Uncertainty is not always a source of risk. Risk may lead to opportunities as well. (INTOSAI, 2007: 10).

We already mentioned that the risk sources are the uncertain situations and at the same time we stated the uncertainty also involves opportunities. That's why risk management is the attempt to minimize the effects of uncertain events. (Günes, 2006).

On the other hand Enterprise Risk Management takes into consideration while determining strategies, put into action in every stage of organization and aims to determine all events that influence the capacity of organization purposes (Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department, July-December, 2008).

Starting point of the enterprise risk management is the determination of enterprise mission and vision. Business determines the strategic targets within the frame of mission, and chooses the strategies to provide reaching the targets (INTOSAI, 2007: 10).

Main purpose of enterprise risk management is to add value to enterprise. It is a disciplined, dynamic, sustainable and proactive system that provides the uncertainties to be assessed and managed as strategy, process, human, technology, uncertainties sourced with information (Manab, Hussin and Kassim, 2007: 2).

Since future contains mostly uncertainty and risk it is important that KRY is to be taken into consideration with strategic management and in a way to support each other (Küçük, 2007). To provide effectiveness and functionality it is essential that the enterprise risk management is to be thought as an integrated part of business. Enterprise risk management that is integrated into strategic management provides the enterprises management quality to increase. (TBB, 2006).

Competition strategy of a business identifies how it sees the risk and how it considers that. In some of the businesses a counter behavior against risk is formed in others risks are used to provide competition advantage. Via relating strategic management attempts of KRY applications and executing them in a way that they support each other is important (Murphy and Davies, 2001). Businesses determine the risk hunger and risk tolerance within the frame of risk management approach and strategies. Also the field that the business executes its activities in industrial fields and in market conditions enterprise structure and other external factors influence risk factor. Determination of risk magnitude that the business confront is an important point for the determination of

the risks that have potential influences on enterprise management processes (Küçük, 2007).

Risk management therefore forms an integral part of strategic planning and results-based management:

It helps the management Risk management will help senior management to plan strategically, allocate resources more wisely, and reform. It enables more responsible decision-making and helps to constrain threats to the organization. Monitoring the results of risk management will become a part of performance auditing ensuring a closer link between expected outcomes, results and evaluation. Existing management and reporting mechanisms will be used in order not to increase staff workload.

It increases efficiency To maximize its impact, an organization has to take risks. Managing risk enables UNESCO to take the lead in its fields of competence and achieve better results especially working in adverse or unreliable environments. Risk management facilitates decision making and priority-setting and thus contributes to achieving the organization's goals more efficiently.

It facilitates innovation To be innovative implies taking risks. Risk management encourages staff to take risks wisely, which means it supports innovation while insuring prudent decision making and maintaining stakeholder trust.

It fosters a supportive work environment for self-reliance Risk management serves as a tool for analyzing causes and consequences of difficult situations rationally and systematically. This enables staff to account for risk management decisions by explaining reasons and evidence on which they are based and thus increases confidence and self-reliance. It is a tool for proactive thinking, learning from experience and for improving team work. It leads to improved stewardship and accountability.

It increases the credibility of the organization Risk management improves results and gives assurance to member states and other stakeholders that goals will be met and thus improves the organization's credibility and reputation. Effective risk management enables us to avoid costly surprises both in terms of spending and credibility or reputation.

2. PRESENT STATE: ENTERPRISE RISK MANAGEMENT IN TURKEY

At the end of the year 2003 a Law with number 5018 namely Public Financial Management and Control Law” has been issued. The law consists at its 5th section matters about the internal control system and the 55th and 56th articles explain the definition and purposes of Internal Control.

Internal control is defined according to Article 55 as execution of activities effective, economic and efficiently in a convenient way that is appropriate for the purposes of the administrative authority, the defined policies and regulations, protection of assets and resources, keeping the accounts accurately and entirely, production of financial information and management information on time and in a secure way that involves the organization, methodology and process and internal control of integrated financial and other controls that is generated by the administrative authority

Purposes of Internal control according to Article 56 is defined as;

- a) Management of public income, expenses, assets and liabilities in an effective, economic and efficient way,
- b) Execution of activities of public institutions in a convenient way with the laws and other regulations,
- c) Prevention of bribery and corruption in every financial conclusions and proceedings,
- d) Receiving secure and timely reports and information to get to conclusions and examination,
- e) To provide the assets not to be misused and to prevent waste and to supply protection against losses.

Terms and conditions for Internal Control and Preliminary Financial Audit have been proclaimed in December, 2005. Second part of the proclaimed terms and conditions is related to the Internal Control. The purposes of Internal control in part two involves internal control standards, basic principles of the internal control, general conditions and elements of internal control, authorities and responsibilities related to internal control and central harmonization target.

Within the purposes of internal control, the purposes outlined within the Law number 5018 “Public Financial Management Control Laws” 5th Parts’ 56th article that was issued in 2003 is used.

As it is stated in the 2nd paragraph of the 55th Article of the 5th part of the Law number 5018 of “Public Financial Management and Control” that is issued at the end of the year 2003, and on the 9th Article of the 2nd Part of the “Terms and Conditions according to the Internal Control and Preliminary Financial Control” in year 2005 central harmonization shall be determined and organized by the Ministry of Finance. On December 2007 Public Internal Control Standards Statement has been issued by the Ministry of Finance.

Basic principles of the Internal Control has been outlined within the procedures and principles as follows:

- a) Execution of Internal Control Actions within the frame of management responsibility of the administrative authority.
- b) Taking into consideration priorily the risk zones in the arrangements of internal control actions
- c) Involving the responsibilities and all duties of internal control during the process.
- d) Involving of internal control of entire financial and non-financial proceedings
- e) Assessment of internal control system at least once annually and determination of the precautions to be taken that shall be necessary
- f) Convenience with the internal control arrangement and application regulations, considering transparency, accountability and economy, effectiveness, efficiency as well financial management principles.

For internal control basic principles, in arrangements of internal control actions priorily it has been stated that consideration of zones with risk probability is essential.

The elements and general conditions of internal control has been defined within 5 main titles:

a) Control environment: It is essential that the managers of the administrative authority and employees both have positive perspective towards internal control, and they follow ethical values and proper management perspective. Within the frame of performance based management perspective it is provided that duties, authorizations and responsibilities shall be given to educated and competent experts and and it is granted that the staff performance shall be assessed. Organizational structure of the administrative authority and duties, authorities and responsibilities of the staff shall be determined obviously.

b) Risk assessment: Risk assessment is an activity that is sustainable and executed taking into consideration the modifications in current conditions. Administrative authority evaluates the risks arising from internal and external risks to reach the purposes and targets to be determined within the strategical plan and performance program.

c) Control activities: Preventive, detective and corrective all types of control activities shall be determined and applied.

d) Information and communication: All types of information shall be recorded, sorted out in an appropriate way that corresponds the administrative authorities requirements and they shall be delivered in a way and in a time that the related authorities execute their responsibilities and duties in a proper way.

e) Observation: Internal control system and actions shall be monitored, reviewed and assessed regularly.

Risk assessment has been considered among the five elements. Risk assessment shall be defined as prediction of variable internal and external negative conditions in a proactive way while application of purposes and targets on the direction of determined strategies that shall be expressed by the administrative authority in their strategic plans and performance programs. Within the frame of Internal Control Standards Statement one of the main principles of internal control shall be defined as assessment of internal control system once annually and taking necessary precautions into consideration. For this

reason internal control system is a process that proceeds dynamically in a proactive way.

Ministry of Finance has issued in December 2007 the “Public Internal Control Standards Statement”. Standards related to internal control have been determined depending on control environment, risk assessment, control activities, information and communication that shall be the 5 elements of internal control that is mentioned on the Terms and Conditions of Internal Control and Preliminary Financial Control within the frame of COSO Model, INTOSAI Public Internal Control Standards Manual and European Union Internal Control Standards. Standards involved within the Public Internal Control Standards Statement by the Ministry of Finance are presented in Figure 10 and explained in details followingly.

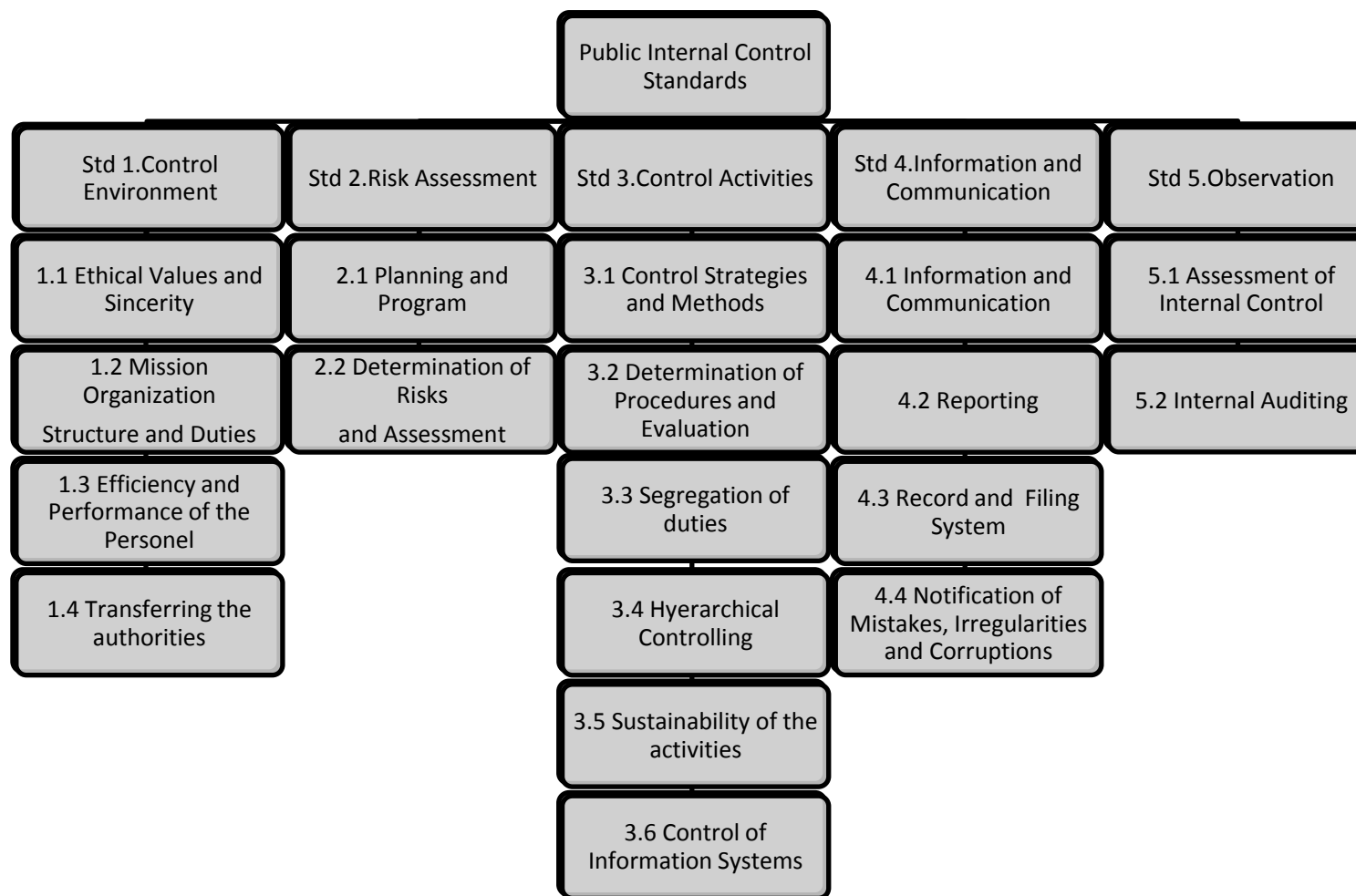


Figure 10 Internal Control Standards (Ministry of Finance, Public Internal Control Standards Statement, December 2007)

2.1 Control Environment Standards

Control environment is a general frame that is basis to other elements of internal control, involves individual and professional sincerity, ethical value of management and personnel, supportive behaviour towards internal control, Professional sufficiency, organizational structure, human resources politics and applications with management philosophy and working manner.

Standard: Rules to outline 1st Ethical values and sincerity personnel behaviours shall be formed by the personnel.

Necessary conditions for this Standard are as follows:

1.1. Internal control system and proceeding must be owned and supported by the manager and the staff.

1.2. Managers of the administrative authority shall behave in a proper way as a model for the application of the internal control system.

1.3. Ethical rules shall be known and in every activity these rules shall be obeyed.

1.4. Sincerity, transparency and accountability in activities shall be provided.

1.5. It shall be behaved just and equal to the personnel of the administrative authority and the ones to be served.

1.6. All sorts of information and documents related to the activities of the administrative authority shall be complete and secure.

Standard: 2. Mission, organizational structure and duties and missions of the administrative authority and its units and staff duties shall be outlined well in a written form, shall be declared to the personnel and a proper organizational structure shall be generated.

Necessary conditions to provide these conditions are as follows:

2.1. Mission of the administrative authority shall be defined in a written form, declared and supplied the fact that it shall be seized by the personnel.

2.2. To provide the mission to be realized the administrative units and units to be executed by the sub-units shall be outlined in a written form and shall be declared.

2.3. Duty Frame Chart that presents the duties of the personnel in administrative units and duties and responsibilities related to these duties shall be generated and shall be notified to the personnel.

2.4. Organizational Chart of the Administrative Authority and its Units shall exist and depending on this functional duty frame shall be determined.

2.5. Organizational structure of the administrative authority and its units shall be in such a form to present the basic duties and responsibilities frame, accountability and proper reporting.

2.6. Managers of the administrative authority shall define the procedures of the activities related to sensitive duties and shall notify to the personnel.

2.7. Managers in every level shall generate such mechanisms to observe the duties given.

Standard: 3rd Personnel's efficiency and performance harmonization among the administrative authorities, staff efficiency and duties shall be provided, and necessary precautions shall be taken for the assessment of performance and its development.

Necessary conditions for this Standard are as follows:

3.1. Human resources management shall be in relation with the administrative authorities' purposes and targets.

3.2. Administrative authorities' managers and staff shall possess the necessary information, experience and talent to proceed their duties in an effective way.

3.3. Professional sufficiency shall be taken seriously and for every target the most convenient personnel shall be chosen.

3.4. For the recruitment, development and promotion of the staff merit principle shall be followed and individual performance shall be taken into consideration.

3.5. For each sort of duty the necessity of training shall be outlined, these necessities shall be executed and updated with convenient trainings to be planned annually.

3.6. Efficiency of the personnel performance shall be evaluated annually by the dependent manager at least once in a year and assessment results shall be interviewed with the personnel.

3.7. Necessary precautions shall be taken to improve the performance of the inefficient staff according to the performance assessment, for the staff with high performance awarding mechanisms shall be developed.

3.8. The conditions related with the human resources management as recruitment of staff, relocation, assignments to superior positions, training, performance assessments, personal rights shall be outlined in written form and shall be declared to the staff.

Standard: 4. Subsidiarity, authorizations in administrations and boundaries of the subsidiarity shall be outlined obviously and shall be declared in a written form. Significance and risk of the subsidized authorization shall be taken into consideration and it shall be executed so.

The necessary conditions for this standard are as follows:

4.1. In work flow processes signature and approval authorities shall be identified and shall be declared to the staff.

4.2. Subsidiarities shall be identified in a written form and shall be declared to the related authorities so that it shall present the boundaries of the authorization subsidized by the superior authority.

4.3. Subsidiarities shall be compatible with the significance of the subsidized authority.

4.4. Staff that the authority shall subsidize is required to possess the knowledge, experience and skills that the position prerequisites.

4.5. The staff that the authority shall subsidize is required to inform the superior in periodical intervals, and the one to subsidize this authority shall seek this feed back.

2.2.Risk Assessment Standards

As part of the internal audition the Risk Assessment is the period for definition, analysis and taking the precautions of the risks to prevent the administrative authority to realize its targets. Starting point for risk assessment are the mission and vision to be outlined by the institution. Institutional management; within the frame of its mission and vision shall identify the strategic purposes, shall choose the strategies to realize these purposes and shall determine the purposes that are expanded to all organization layers. This condition shall be arranged with the following “Planning and Programming” standard.

Standard: 5. Administrative authorities shall identify and declare their plans and programs that involve the necessary resources and their activities, purposes, indications. They need to provide the appropriateness of their plans and programs.

5.1. Administrative authorities with the purpose of generating their missions and visions, identifying their strategic purposes and measurable purposes, measuring their purposes, monitoring and assessing need to prepare strategic plans with participating methods.

5.2. Administrative authorities shall prepare a performance program that indicate the program to be executed, resource necessities for the activities and projects, and purposes and indications.

5.3. Administrative authorities shall prepare their budgets convenient with their strategic performances and plans.

5.4. Managers shall provide the appropriateness of the activities to regulations, strategic plan and performance programs purposes and aims.

5.5. Managers shall declare within the frame of the work specific targets compatible with its individual purposes.

5.6. Administrative Authorities' and its Units' purposes shall be specific, measurable, reachable, related and shall cover a specific period of time.

Standard: 6. Administrative authorities shall define the internal and external risks that may prevent their purposes to get realized and assess and take the necessary precautions in a systematic way through analysis. The necessary conditions for this standard are as follows:

6.1. Administrative authorities shall define the risks towards their purposes and aims annually in a systematic way.

6.2. The probability of risk to be realized and the possible influences shall be analyzed once annually at least.

6.3. Action Plans shall be generated through identifying the precautions against the risks.

2.3.Control Activities Standards

Control activities are the policies and procedures to realize the purposes of the administrative authority and managing the identified risks.

Standard: 7. Control strategies and methods : Administrative authorities shall determine and apply appropriate control strategies and methods to realize targets and preventing the risks.

Necessary conditions for this standard are as follows:

7.1. Each activity and appropriate control strategies and methods for its risks (shall be identified and applied. (regular examinations, controlling via sampling, comparing, approval, reporting, coordination, correction, analysis, authorization, observation, reviewing, monitoring etc.).

7.2. Controls under necessary circumstances shall involve pre process control, durational control and post process control.

7.3. Controlling activities shall involve periodical controls of assets and supplying the security.

7.4. Determined controlling methods costs shall not exceed the expected benefit.

Standard: 8. Expressions about the determination of procedures certification: Administrative authorities, for their transactions with their activities for financial conclusions shall prepare the necessary written procedures and related arrangements, they shall be updated and issued to the reaching of the related staff.

General conditions necessary for these standards are as follows:

8.1. Administrative authorities, with their activities shall identify written procedures with their financial conclusions and transactions.

8.2. Procedures and related documentation shall involve the initiation of activity and financial conclusion, its applications and conclusion phases.

8.3. Procedures and related documentation shall be updated, comprehensive, compatible with the regulations, obvious for the staff to get understood easily and shall be reachable.

Standard: 9. Segregation of duties: To reduce the errors, shortages, mistakes, inappropriateness and corruption risks duties shall be distributed among the staff properly for the approval of the financial conclusions and approval, applications, recording and controlling of transactions.

Necessary conditions for this standard are as follows:

9.1. Approval, applications, recording and controlling of every activity or financial conclusion and processes shall be distributed among different people.

9.2. The Managers of Administrative Authorities where Segregation of Duties principle shall not be applied properly as the staff number is insufficient shall be aware of the risks and shall take the necessary precautions.

Standard: 10. Hierarchical controls Managers shall control the work and processes appropriateness in a systematic way.

Necessary conditions for this standard are as follows:

10.1. Managers shall execute the necessary auditing for effective application of procedures.

10.2. Managers shall give the necessary instructions for the mistakes and inappropriatenesses to be corrected and they shall monitor and approve the work and processes of the staff.

Standard: 11. Continuity of the activities Administrative Authorities shall take the necessary precautions towards providing the continuity of the activities.

Necessary conditions for this standard are as follows:

11.1. Necessary precautions shall be taken against insufficient number of staff, resignation of duties temporarily or permanently, transition to new information systems, extraordinary conditions with methodological or legislative amendments that influence the continuity of the activities.

11.2. Under necessary circumstances in a proper way deputy staff shall be assigned.

11.3. It shall be provided by the Manager that the resigned staff shall prepare a report to demonstrate the state of the work and processes and a report including necessary documentation and shall deliver this report to the staff that shall be assigned to this position.

2.4.Knowledge-Communication Standards

Standard: 12. Controlling of the Information Systems Administrative authorities shall develop mechanisms to provide the necessary controlling to supply the continuity and security of information systems.

For this standard necessary conditions are given as follows:

12.1. Controls to supply the continuity and security of information systems shall be determined and applied in a written way.

Information and communication includes knowledge, communication and recording system to be delivered to the necessary person, staff, and manager who requires it in a proper format and in an effective timely plan that enables the related staff to fulfill internal and other responsibilities.

Standard: 13. Information and Communication Administrative authorities shall possess proper information and communication system to monitor its units and staffs' performances, the proceeding of their decision making periods in a healthy way and to supply the satisfaction and effectiveness in service providing.

Necessary conditions for this standard are as follows:

13.1. In administrative authorities there shall be an information and communication system that involves horizontal and vertical internal communication and external communication.

13.2. Managers and staff shall reach the necessary and sufficient information on time to fulfill their duties.

13.3. Informations shall be correct, secure, complete, obvious and beneficial.

13.4. Staff related to Managers shall reach to informations related to the application of performance program and application of budget and using the resources.

13.5. Management Information System shall be designed in such a form that the present the necessary information and reports to management and capable of analysis.

13.6. Managers shall declare to the staff their expectations within the frame of the mission, vision and purposes of the administrative authority within the frame of their duties and responsibilities.

13.7. Horizontal and vertical communication system of the administrative authority shall provide the delivery of staffs' assessment, proposal and problems.

Standard: 14. Reporting shall be executed with regard to administrative authorities' purposes, targets, indications and activities and its results, transparency and accountability principles.

Necessary conditions for this principle are given as follows:

14.1. Administrative authorities, annually shall declare publicly their purposes, targets, strategies, assets, liabilities and performance programs.

14.2. Administrative Authorities shall declare publicly the application results of their budgets for the initial 6 month period, expectations against the second six month period and their activities and targets.

14.3. Activity results and assessments shall be presented inside the management activity report and shall be declared.

14.4. With the purposes of the activities monitoring horizontal and vertical reporting network shall be identified in a written way, and unit and staff, duties and reports considering the activities.

Standard: 15. Archive and File System Administrative authorities shall possess a comprehensive and updated system including all sorts of incoming and outgoing documents where works and processes shall be archived, classified and filed.

Necessary conditions for this standard are as follows:

15.1. Archive and filing system shall involve the electronic media, incoming and outgoing documents and internal administrative communications.

15.2. Archive and filing system shall be comprehensive and updated, shall be reached and reviewed by the manager and staff.

15.3. Archive and filing system shall provide the security and protection of the personal data.

15.4. Archive and filing system shall be appropriate for the identified standards.

15.5. Incoming and outgoing documents shall be archived on time, shall be classified in a proper way according to the standards and shall be protected according to the archive system.

15.6. A documentation system shall be generated of recording of administrative authorities work involving processes, classification, protection and reaching compatible with the determined standards and documentation.

Standard: 16. Declaration of errors, corruption, and inappropriatenesses Administrative authorities shall form methods to declare the errors, inappropriatenesses and corruptions in a predetermined order.

Necessary conditions are as follows for this standard:

16.1. Errors, corruptions and inappropriatenesses declaration methods shall be determined and declared.

16.2. Managers shall execute the sufficient examination regarding errors, inappropriatenesses and corruptions.

16.3. To the staff that declare the errors, inappropriatenesses unjust and discriminating manners shall not be shown.

2.5.Monitoring Standards

It involves the entire monitoring activities to be executed for the assessment of Monitoring and internal controlling systems quality.

Standard: 17. Assessment of internal control Administrative authorities shall evaluate the internal control system at least once in a year.

Necessary conditions for this standard are as follows:

17.1. For internal control system, continuous monitoring or specific evaluation or combination of these two methods shall be used.

17.2. For the determination, declaration and taking the necessary precautions of the missing sides of the internal control and inappropriate controlling methods process period and methodology shall be identified.

17.3. Participation of administrative authority shall be provided for the assessment of internal control.

17.4. For the assessment of internal control, managers perspectives, individual and/or administrative authority requests and complaints and reports to be prepared after internal and external auditing shall be taken into consideration.

17.5. The necessary precautions as a result of the assessment of the internal control shall be identified and shall be applied within the frame of an action plan.

Standard: 18. Internal control: Administrative authorities shall provide independent internal control activities functionally.

Necessary conditions for this standard are as follows:

18.1. Internal control activity shall be executed after the standards identified by Internal Auditing Coordination Council.

18.2. As a result of the internal auditing for the necessary precautions to be taken by the administrative authority shall be followed by an action plan prepared, applied and monitored.

2.6.Internal Control and Corporate Risk Management Relationship

One of the Internal control condition is the risk assessment. With risk assessment it is aimed the events to be predetermined that shall prevent the enterprise to fulfill its duties and responsibilities and to minimize the losses.

Within the frame of risk assessment risks within the frame of aims and targets are identified regularly in an annual perspective. These shall be prioritized according to their influences and probabilities. Prioritized risks according to the risk level that the enterprise shall undertake control methods and activities are identified.

As it seems risk assessment is evaluated as a component of the internal controlling. Enterpriseal risk management is a continuous process that is applied in every level and every unit of the organization that aims to detect all sorts of events to influence the realization capacity of the organizational purposes. (Republic of Turkey Ministry of Finance Budget and Financial Auditing General Directorate Financial Management and Control Department, July – December, 2008). Enterpriseal Risk Management is a more complex process compared to the risk assessment which is a component of internal control.

Within the magazine published by the Republic of Turkey Ministry of Finance Budget and Financial Control General Directorate Financial Management and Control Department in 2008, Internal control is defined as an integrated part of the enterpriseal risk management. Also enterpriseal risk management control does not only involve the internal control but also it is a conceptualization that presents the flow of the corporate operational decisions from main mission and related purposes. It is also a supplementary tool to the management to identify the right answer against a proper event.

3. ENTERPRISE RISK MANAGEMENT IMPLEMENTATION IN A PUBLIC INSTITUTION

3.1. Purpose and Importance of the Research

This thesis research, within the frame of internal control system is important regarding enterprise risk management applying public institution applications', ideal enterprise risk management applications' specifications and considering the fact that it is a role model to applications in Turkey.

Detection of risks and the possible involved opportunities sourcing out of uncertain events to arise in the future and enterprise management is significant regarding the businesses to reach their targets. Public administrations do not work focused on costs and the main focus is offering quality services to citizens. Services produced by public institutions may have losses regarding the risks' time, quality, dignity influences. That's why in public institutions protecting and increasing value enterprise risk management is an important application. Also in Law No. 5018 Public Financial Management and Control Law enterprise risk management is stated as obligatory. Because of the obligation of presenting appropriate services with quality and continuously to fulfill citizens' expectations and to be active convenient with legal applications enterprise risk management is important. This thesis research aims to disclose enterprise risk management in public institutions and to generate basics to further research works.

3.2. Limitations of the Investigation

As a result of literature reviews to be foundations to the research work sufficient sources have been reached regarding the risk management. When the research becomes compact under the title of enterprise risk management mostly it has been reached to financial risk based works. Within the frame of internal control system in enterprise risk management research there are limited numbers and content of work found. Especially in our country in public institutions the situation that enterprise risk management is a new term this makes the main limitation of this research. As the second limitation enterprise risk management works' are intensified in financial sectors as much as banking and in project management.

Apart from the literature information works towards the application mostly it is detected as limitation.

3.3. Scope and Method of the Research

For the theoretical part that involves literature research risk management, enterprise risk management related Turkish and English papers from databases on internet, thesis, researches, scientific magazines etc. sources that involve internal control subjects have been reviewed. After the literature review on the application part General Directorates that are active in Metropol Municipalities in Turkey are taken into consideration. Within the frame of the research works' application for the detection of current situation of control environment a questionnaire work and interviews have been done. Within this frame review of existing sources and legal regulations, design of questionnaire and interview questions, and with the application of questionnaire and interviews data acquisition and analysis have been done. Within the frame of risk evaluation works expert interviews and focus group meeting have been done. Data extracted from here are organized and analysis have been executed.

Subject	Literature	Years	Quantity
Risk Management	Article	1980-2000	891
Risk Management	Article	2000-2014	3916
Internal Control	Article	1980-2000	429
Internal Control	Article	2000-2014	1093
Risk Management And Internal Control	Article	1980-2000	3
Risk Management And Internal Control	Article	2000-2014	20

Figure 11 Literature Review- Article

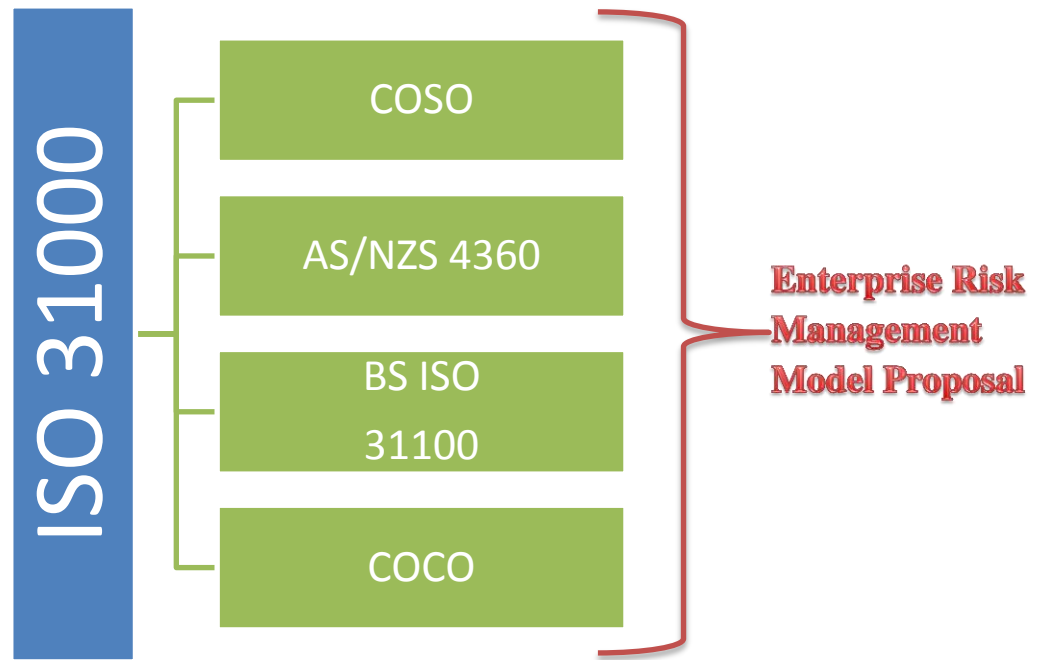


Figure 12 Literature Review- Standarts and Models

3.4. Enterprise Risk Management Model Proposal Development Process

The process of enterprise risk management model as presented in Figure 13 are developed as a result of the investigation of legal obligations, reviewing the related literature, domestic and international public and private institutions similar works' examination, establishing the model, application of model in a public institution, organizing the results and making analysis and validating the model activities.



Figure 13 Enterprise Risk Management Model Proposal Development Process

3.5. Enterprise Risk Management Model Proposal and Model Investigation and Findings

Enterprise risk management model proposal is given in Figure 14.

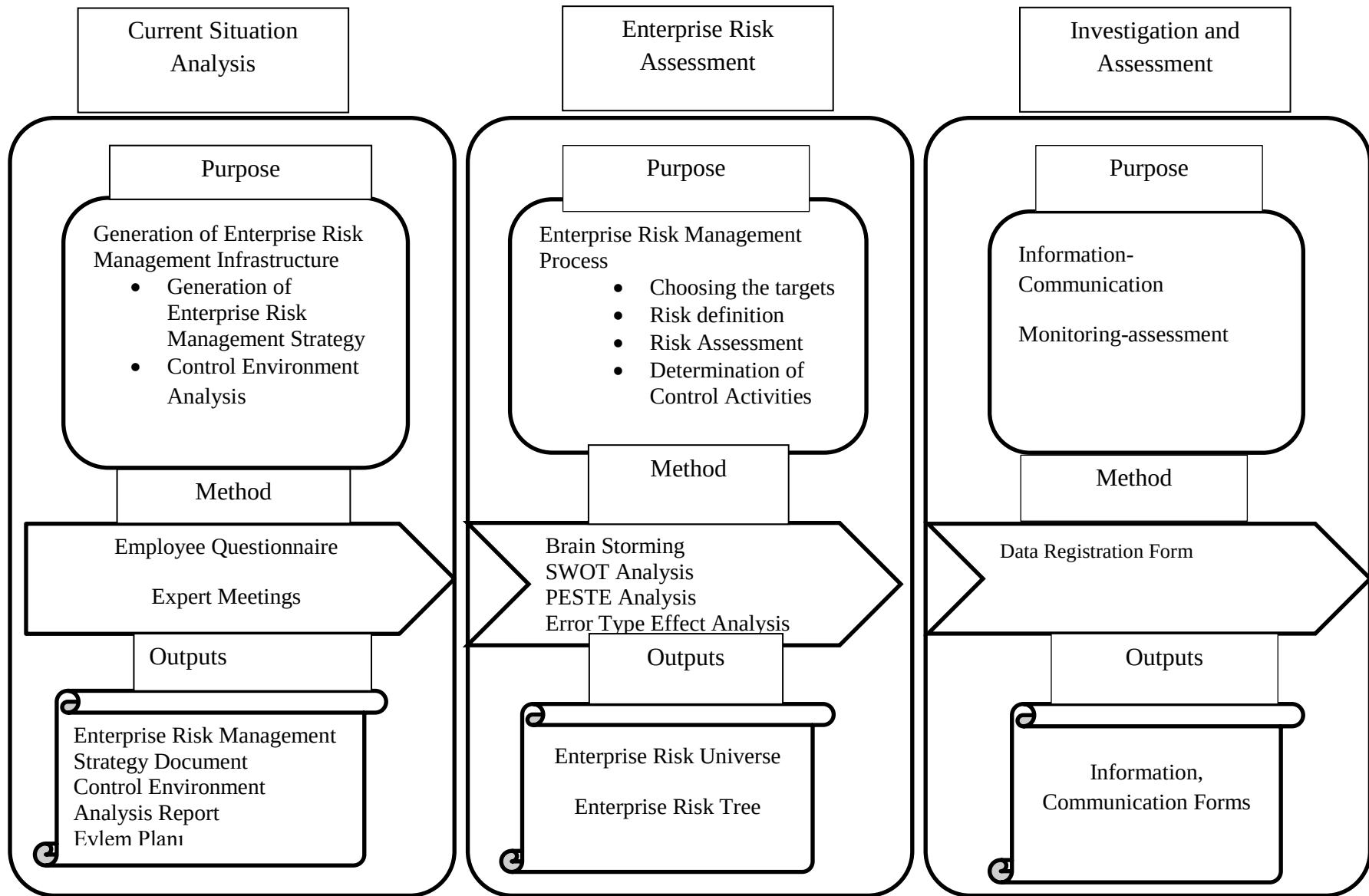


Figure 14 Enterprise Risk Management Model Proposal

3.5.1. Generation of Enterprise Risk Management Infrastructure

Enterprise risk management infrastructure is provided via related strategies determination and documentation, on the light of the control environment standards analyzing the current enterprise state, determination of actions to provide enterprise standard convenience according to analysis results and converted into action plans. The executed works are given below in details.

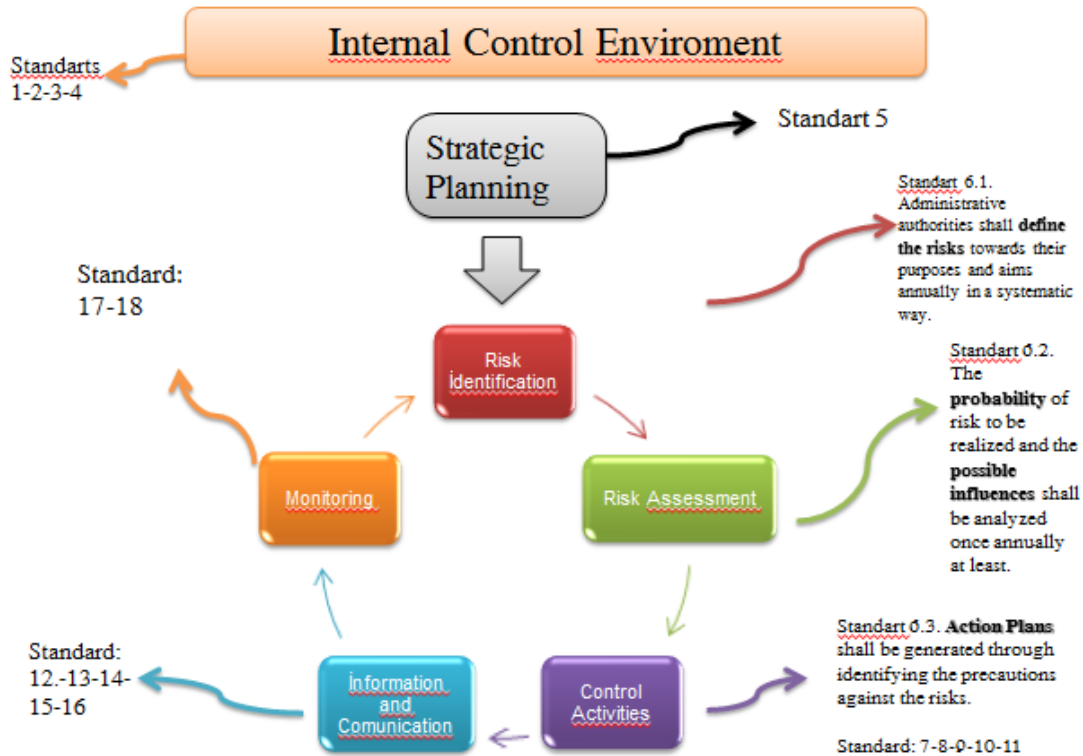


Figure 15 Enterprise Risk Management Process

3.5.1.1. Generation of Enterprise Risk Management Strategy

Within the frame of enterprise risk management including superior management and institution employees approaches policies it is called enterprise risk management strategy. The document that these approaches and policies are written are called enterprise risk management strategy document. Enterprise risk management strategy generates the enterprise risk management process. Internal control authorization and responsibilities are defined by Monitoring and Orientation. It is guide to enterprise employees in risk management activities.

Enterprise risk management strategy shall present the enterprise risk hunger in a strategic and proactive way. Enterprises risk hunger shall change according to the changing environmental conditions. As mentioned on the basic principles of internal control terms and conditions the arrangements related to internal control system shall be reviewed at least once annually. That's why risk hunger shall be updated in this direction.

Enterprise risk management strategy is determined within above frame. Enterprise aims targets and enterprise service zones is related to superior policies.

In enterprise risk management strategy document general frame is established below with the following headers:

- a) Purpose of Risk Management
- b) Risk hunger
- c) Regulation and superior policy documents convenience
- d) Enterprise risk management process
- e) Risk methodology to be applied
- f) Determination methods of Risks
- g) Risk assessment
- h) Determination of control activities
- i) Organizational structure, authorization and responsibilities
- j) Communication plan
- k) Documents to be used (Ministry of Finance draft guide)

3.5.1.2.Control Environment Analysis

Control environment, is analyzed using two different enterprise actual states. Towards the employees control environment standards to measure the current state a questionnaire has been made. Questionnaire possesses 45 pieces of statements. With the experts structured interviews has been made. It has been attempted measure the current state with 75 pieces of statements to be asked to experts in interviews. Statement expressions to control environment standards are developed to legal arrangements and academic researches results convenience measuring. Obvious, understandable and direct enterprise current state measuring expressions are determined. Towards experts and employees the improved statements are given in Annex 1.

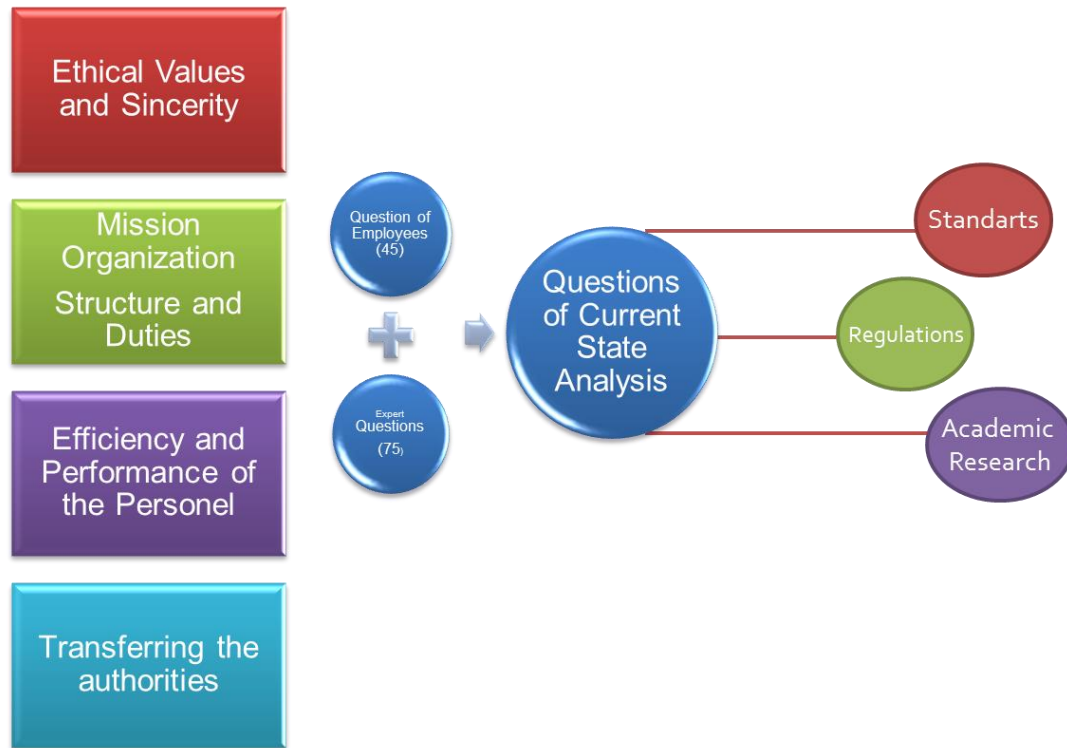


Figure 16 Development of Internal Control Enviroment Analysis Questions

In order to measure the current state expressions in enterprise 5 scales have been used. Used scales are given on Table 7.

Table 7 Actual State Questionnaire Scale

ACTUAL EXISTENCE LEVEL	SCORE
I absolutely not agree	1
I don't agree	2
I agree a little	3
I do agree	4
I absolutely agree	5

In the direction of determined statements 11 experts and interviews have been realized. To the employee questionnaire in enterprise 359 persons have attended. Interview and questionnaire related profile are given on Figure 15-18.

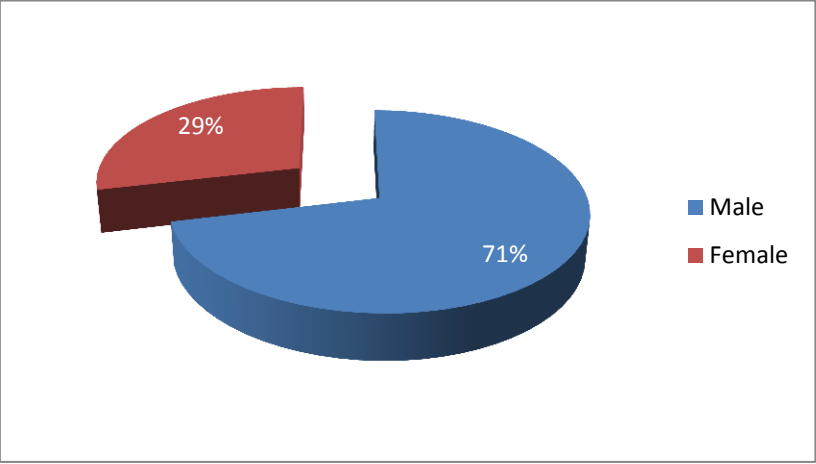


Figure 17Attendant Profile – Gender

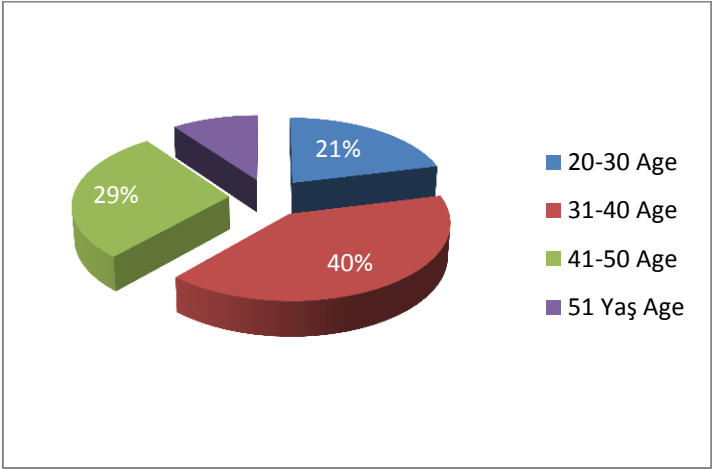


Figure 18 Attendant Profile – Age

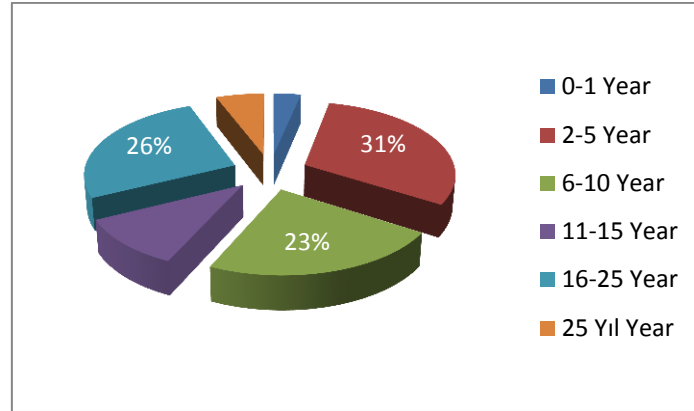


Figure 19 Attendant Profile – Experince

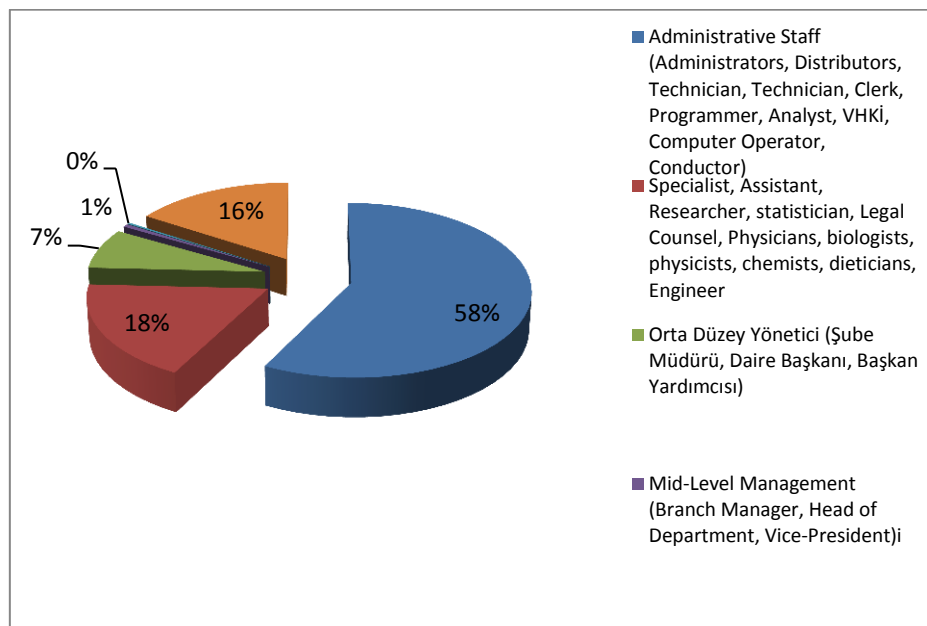


Figure 20 Attendant Profile – Title

Through the interviews and questionnaires executed the obtained data is analyzed and and the results obtained from Table 8 and in Figure 19.

Table 8 Current Status Analysis Results

Standard	General Condition	Expert		Employee	
		General Condition Average	Standard Averages	General Condition	Standard Averages
KOS.1	KOS.1.1	5,00	3,34	3,71	3,16
	KOS.1.2	4,00		3,27	
	KOS.1.3	3,36		3,04	
	KOS.1.4	5,00		-	
	KOS.1.5	1,00		2,60	
KOS.2	KOS.2.1	4,88	4,25	3,69	3,49
	KOS.2.2	4,33		-	
	KOS.2.3	4,03		3,50	
	KOS.2.4	4,90		3,77	
	KOS.2.5	4,33		2,96	
	KOS.2.6	3,00			
	KOS.2.7	4,00		3,51	
KOS.3	KOS.3.1	2,55	2,37	-	2,71
	KOS.3.2	4,14		3,30	
	KOS.3.3	4,00		2,67	
	KOS.3.4	1,00		2,31	
	KOS.3.5	2,57		3,10	
	KOS.3.6	2,00		2,45	
	KOS.3.7	1,33		2,50	
	KOS.3.8	1,38		2,65	
KOS.4	KOS.4.1	4,75	4,57	3,85	3,53
	KOS.4.2	4,75		3,26	
	KOS.4.3	4,67		-	
	KOS.4.4	4,67		-	
	KOS.4.5	4,00		3,48	

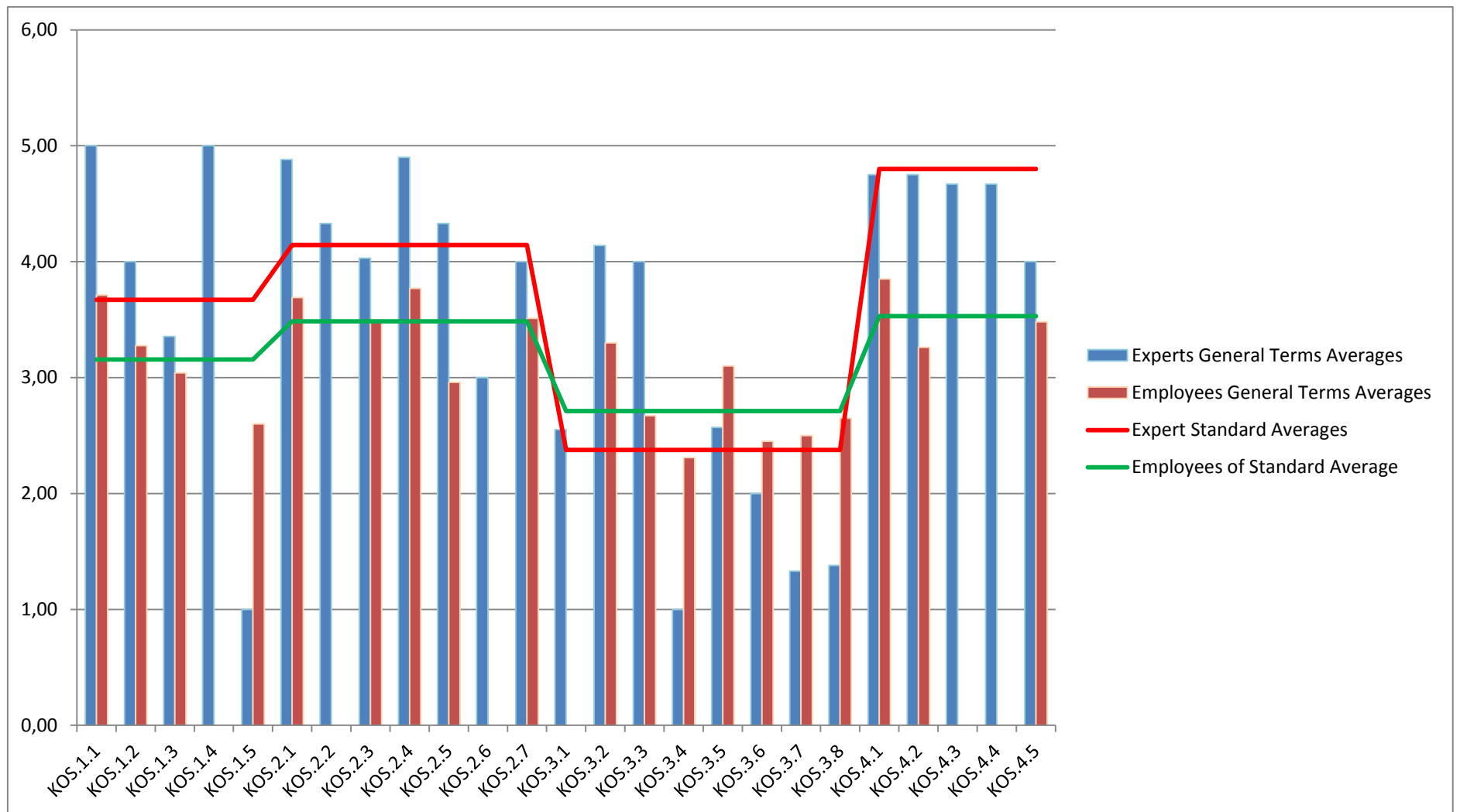


Figure 19 Current State Analysis Results

Via evaluating interview and questionnaire results convenience to corporate control environment standards have been measured. Actions have been developed when no convenience to standards exist. In these zones it has been aimed that enterprise standards on minimum levels corresponded at appropriate security levels. On control environment from the aspect of standards reaching to logical security levels that lead to problematic and troubled situations will be reduced to minimum. Thus in risk determination works apart from the troubles and problems experienced actually risk situations that involve uncertainties to happen in future shall be extracted. Also for control activities developed against risks this will be a foundation. Developed action expressions are given on Table 9.

Table 9 Control Environment Standards Convenience Actions

Control Environment Standard	Action
KOS 1.1/1	In a meeting where the superior management have attended, sharing the internal control action plan and approval
KOS 1.1/2	Providing the internal control working group sustainability and in 6 moth periods collection of reports ,execution of assessment meetin once annually
KOS 1.1/3	Generation of internal control manual
KOS 1.3/1	With the purpose of attributed ethical rules within enterprise among employees and intermediate level managers giving the ethical training, if necessary making the arrangements of meetings.
KOS 1.3/2	Making the ethical principles slogans, making them supported by images and turned into written form and declaring them to employees (poster, panel, intranet)
KOS 1.3/3	Every staff that show extreme success and model ethical behaviours before the publicity and management this behavior to be emphasized and encouraged.
KOS 1.5/1	Bringing to agenda the requests and expectations of employees over intranet, for the ones to be served generation of a system that the requests and complaints are to be delivered

Table 9 Control Environment Standard Convenience Actions (continue)

Control Environment Standard	Action
KOS 2.1/1	Presentation of enterprise through images with expressions of mission and vision and to be published on the intranet and website
KOS 2.3/1	Related to the titles of the staff reviewing the duty distribution charts authorizations and responsibilities, making up the shortages and declaration to the staff
KOS 3.1/1 KOS 3.4/1 KOS 3.6/1 KOS 3.7/1 KOS 3.8/1	After outlining the individual performance system of State Staff Head of Department initiating the works.
KOS 3.2/1	For the ones to start working actually arrangements of orientational trainings
KOS 3.2/2	Encouraging the staff regarding Masters and PhD educations
KOS 3.5/1	Generation of an educational system on duty basis that presents the educational necessities.
KOS 3.5/2	On subjects that arise within the frame of the requirements training of new trainers through the education of trainers
KOS 3.5/3	For newly recruited staff arranging the orientational trainings

3.5.2.Choosing the Targets

While defining the risk from the aspect of internal control risk has been defined all sorts of states or conditions that may prevent the enterprise to reach its aims and targets. Priority of and effective enterprise risk management is the identification of risks in a proper way. In order to the fact that correct risks are to be identified it is a prerequisite that targets and target levels shall be expressed primarily.

3.5.3.Determination of Risks

On enterprise, unit and sub-unit levels it is aimed the states and conditions to be determined to prevent the determined targets.

Mission, vision, purpose and target expressions that exist on the strategic plan at enterprise level, SWOT analysis, PESTE analysis results, performance programs, activity reports, enterprise structure are taken as basis and risk determination works are executed.

In risk determination works as a method expert interview, focus group works and brain storming methods are used. With the experts working on strategic planning, activity report and performance report preparation one to one interviews are executed.

In interviews related management zones planning, application and assessment levels shall be evaluated separately and risky areas are detected. After that determined risk in focus group meetings that the experts and superior managers attended the risky zones are evaluated in enterprise risk universe. Enterprise risk universe is given on Figure 18. Also in focus group meetings risk definitions are determined to be formed in risk zones. While determining the risk definitions with the attendance of internal and external shareholders in strategic plan, SWOT and PESTE results are also taken into consideration and brain storming has been done and risk definitions are detected. On unit levels aims and targets to be reduced to unit level, strategies to realize aims and targets, projects as elements of strategies and unit main activity zones are evaluated. In Risk determination works as a method expert interviews and focus group works are realized. Project executors and members and projects are evaluated separately and risks are detected. Also unit managers and focus group meetings are realized and from the main activities and unit targets sourced risks are determined. At sub unit level processes are taken into consideration. Process responsible and focus group meetings are realized and risk sourced processes are required to be detected.

At all these three levels obtained risk expressions are evaluated and enterprise risks are collected at figure 18 in risk universe under risk zones. Totally 61 risk expressions are defined. Risk expressions are in Annex 2.

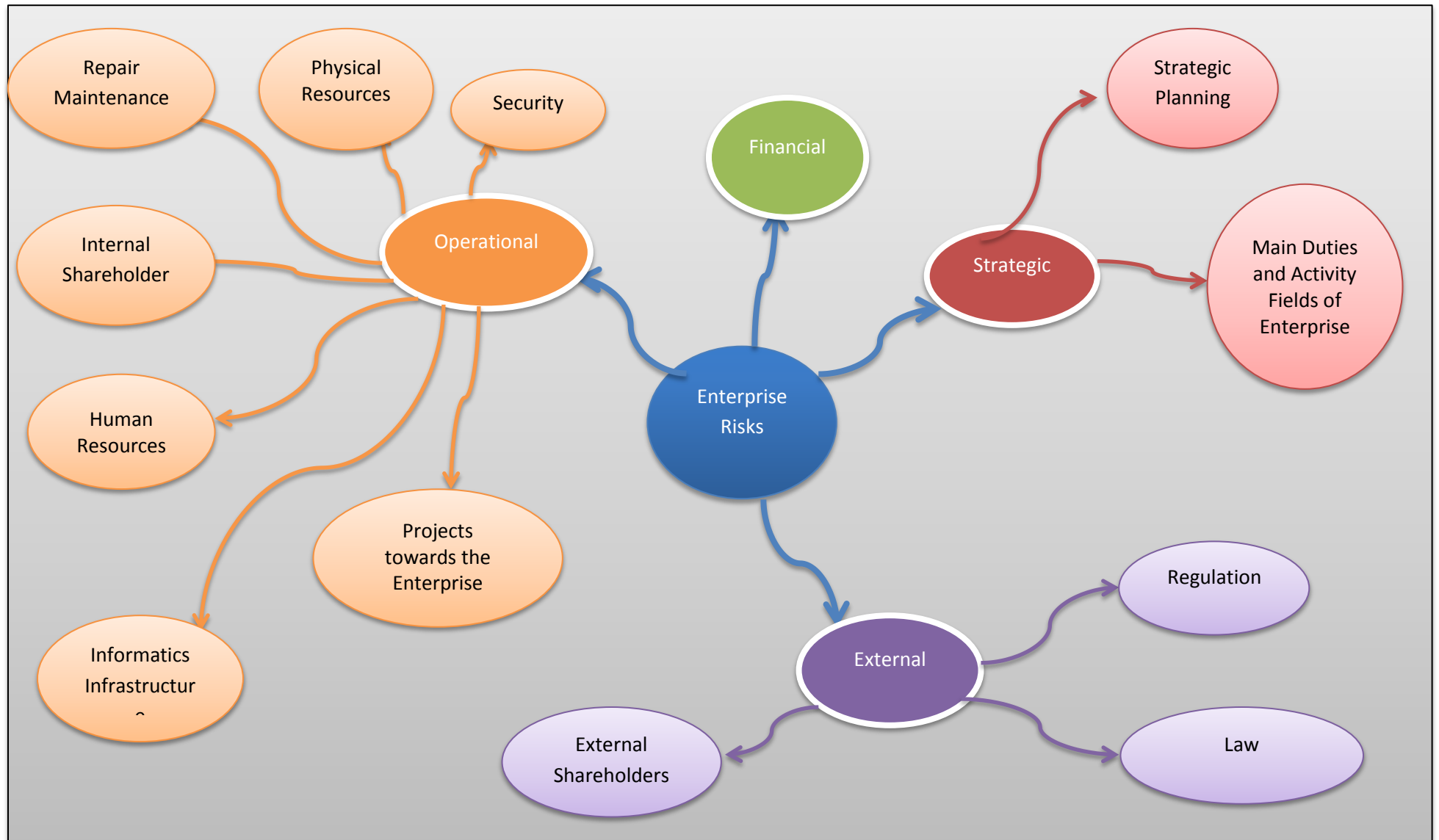


Figure 20 Enterprise Risk Universe

3.5.4. Assessment of Risks

Public internal control standards risk evaluation elements' standard number 6.2 expresses that risks probability of realization and on the condition that they realize its possible influences shall be evaluated at least once in a year. Within this frame 40 enterprise risk expressions as a result of risk determination attempts are evaluated according to effects and probabilities. For evaluation a meeting has been done with superior management and experts. Assessment are evaluated with 5 scale to range effects and possibilities. Used scale and scale values are given on Table 10.

Table 10 Risk Assessment Scale - Probability

Point	Degree	
5	Probability very high	Probability of occurrence is very high (%80-%99)
4	Probable	Probability of occurrence is high (%51-%79)
3	Maybe	No statements can be expressed (%50)
2	Less probable	Probability of occurrence is low (%20-%49)
1	Rare	Probability of occurrence is very low (% 1-%19)

Table 11 Risk Assessment Scale - Effect

Score	Degree	Time	Cost	Performance
5	Destructive	Increase of time %20	Increase of cost %20	Increase of performance %20
4	Major	Increase of time %10-%20	Increase of cost %10-%20	Increase of performance %10-%20
3	Middle	Increase of time %5-%10	Increase of cost %5-%10	Increase of performance %5-%10
2	Minor	Increase of time %5	Increase of cost %5	Increase of performance %5
1	Ineffective	Ineffective	Ineffective	Ineffective

In table 10-11 related to risks the given scale values are assigned via effect and probability. Risk score is obtained via multiplication of effect and probability.

$$\text{Risk Score (RS)} = \text{Probability} * \text{Effect}$$

Risks according to the distribution on 5X5 matrix of obtained risk score are categorized as high, medium and low in 3 categories.

Preliminarily determined risks' effect, probability evaluations have been done and risk scores have been calculated. Effect, probability and risk score values related to risks and risk class distributions regarding risk scores are shown in Annex 2.

Vai getting the risk score averages of risks in the same category category risk score values are obtained. In Table 12 category risk values are presented.

Table 12 Risk Class

		Effect				
		Ineffective	Minör	Medium	Major	Destructive
Prpbability	Very high probability	Medium	Medium	High	High	High
	Probable	Low	Medium	Medium	High	High
	Maybe	Low	Medium	Medium	Medium	High
	Less probable	Low	Low	Medium	Medium	High
	Rare	Low	Low	Low	Medium	Medium

As a result of risk determination works 61 pieces of detected risk expressions' effect probability evaluations are done. After that the effect probability values are determined with the multiplications risk score is obtained. According to the point that effect probability multiplication results are shown on Table 11 on the matrix, risks are categorized as high, medium and low risks. As a result of the assessments, from 61 risk expressions 8 pieces have high, 53 pieces have medium risks. It has been detected that no low risk definition are found. On Figure 21 risk class distribution ratios are given.

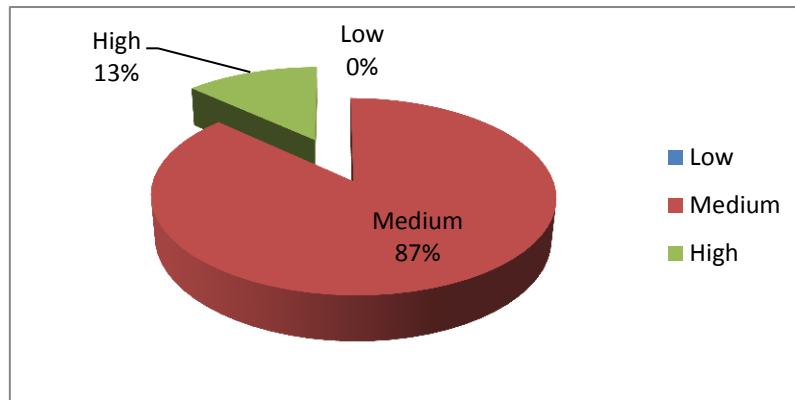


Figure 21 Risk Class Rates

Under all sorts of risk zones when the risk score averages are taken of risks, risk score of that zone is obtained. When 13 risk zone results are reviewed main duties and activity fields of enterprise, significant projects towards enterprise infrastructure, internal shareholders and high risk zones for strategic planning have been detected.

Risk zones remaining under the target levels' risk score averages lead us to risk scores of target levels. Here strategic and operational level is detected as high risk zones.

Table 13 Target Level Risk Scores

Enterprise Risks	Target level	Risk Zone	Risk Zone Score	Target Level Risk Score
	Strategic	Strategic planning	10,5	12,75
		Main duties and activity fields of enterprise	15	
	Financial	Financial Sources	7,3	7,3
	Operational	Human Resources	11,4	10,4
		Informatics infrastructure	9,4	
		Significant Projects towards the Infrastructure of the Enterprise	12	
		Internal Shareholders	11	
		Repair & Maintenance	8,6	
		Physical Sources	11	
		Security	9,2	
	External	Regulation	10	8,6
		Law	7,5	
		External Shareholders	8,25	

3.5.5.Determination of Control Activities

After the evaluation of risk effect probability is done risk scores are classified according to their magnitudes. According to risk classes risk response policies are developed. Against the risks 4 sorts of responding policies are applied on Figure 22.

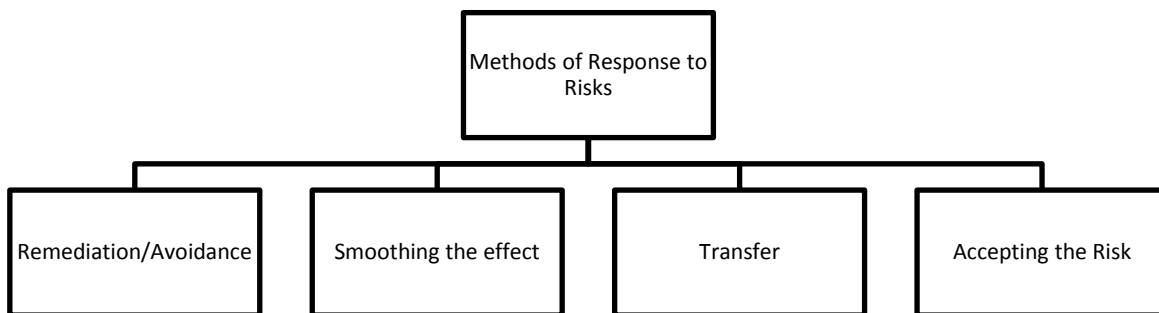


Figure 22 Methods of Response to Risk

IT is determined which control activities will provide the responses to risks that are evaluated within risk hungers and determined risk response policies. Cost-benefit analysis are executed before determining the control activities against risks. As a result of the improved control activities and responses to risks the expected risk probability target and/or to target foreseen via terminating the effect or reducing is to reach in an effective way. After the risks of effects and probabilities in Figure 23 information about the improved control activities are given. Responses according to all risks and improved control activities are on Annex 3.

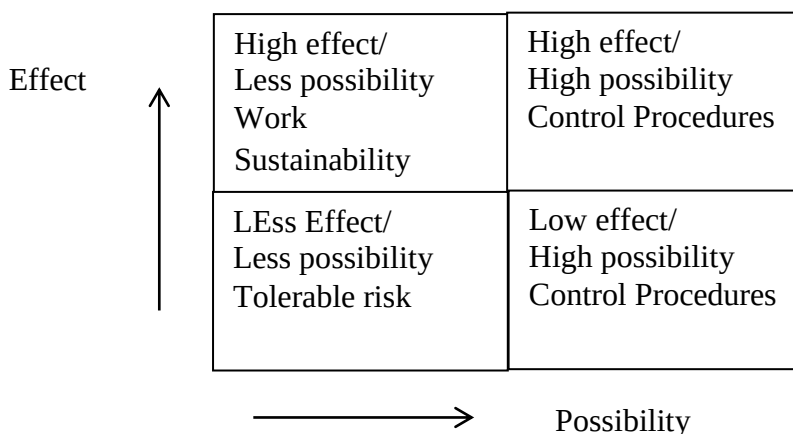


Figure 23 Control Activities Matrix

According to the risk classes as a result of risk assessment it is determined how a response is to be given against the risks. Among the four response methods from figure 20 one is chosen. If risk expression or source that forms the risk can be removed completely remediation/avoidance response method is preferred. If the effects are not to be aside but can be reduced the method as smoothing the effect is chosen. If risk effects are avoiding via enterprise, unit or person or completely and partially transfer method is used. Finally according to cost benefit analysis in order to be protected from risks, if the improved activities cost is higher, than risk acceptance method is preferred.

AS a result of the evaluations among 61 pieces risks, for 34 pieces smoothing of the effect method is preferred. For 23 pieces Remediation/Avoidance method is preferred, and for 4 of them risk acceptance method is used. Transfer method is not applied. Figure 24 shows the risk response distribution rates.

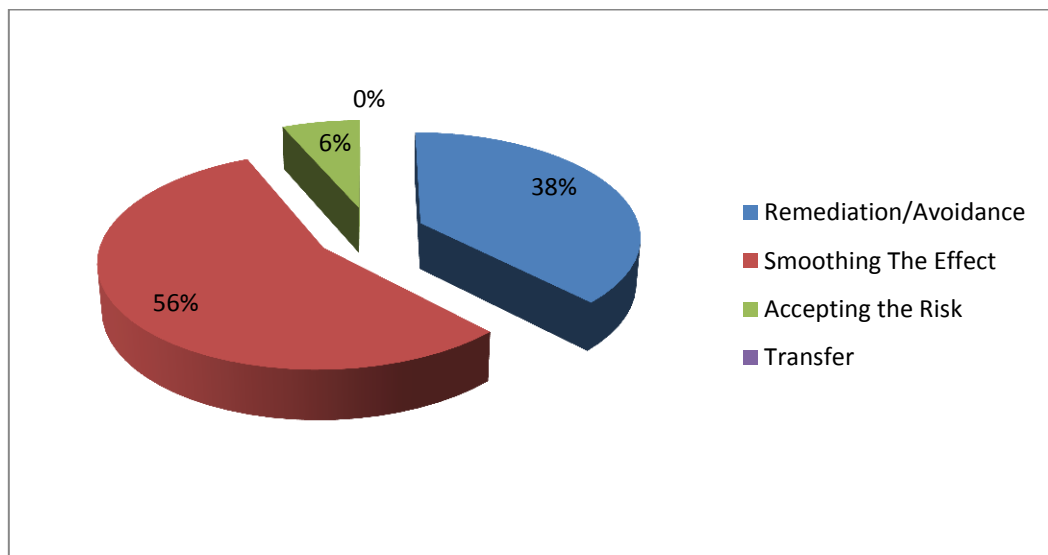


Figure 24 Risk Response Method Ratios

4. CONCLUSION AND PROPOSALS

With the economic crisis in the beginning of 2000s, the need for a change in institutional management systems in public institutions has come to light. The reason for this is the citizen's EU harmonization process. Considering that the public institutions provide services to citizens, another need stems as citizen satisfaction and quality focused service provision.

In the end of 2003, legal regulations are used to create an infrastructure for institutional management systems that will meet the needs. Main benefits of new regulations have been accountability, fiscal transparency, financial discipline, re-structuring public financial management, internal control and audit. As observed internal control is one of the bases of desired management system.

The term internal control was a management systematic for public institutions that needs to be discovered. For this reason, within the secondary legal regulations formed in 2005 and 2007, the scope, purpose, main principles, components and standards of internal control systematic were determined.

Efficient management of public income, expenses, assets and liabilities, proper functioning of public institutions according to laws and other regulations, prevention of irregularities and corruption in any financial decision and transaction, timely and reliable report and information provision to make decisions and monitor them, prevention of abuse and waste and protection against losses were determined as the main purposes of internal control.

The systematic of internal control is handled as 5 components as control environment, risk assessment, control activities, info-communication and surveillance and 18 standards and 79 general conditions have been developed to sustain these components.

To build an internal control systematic and to sustain it, realization of internal control activities under the responsibility of administrative unit, prioritized consideration of risky areas in internal control activities and regulations, related responsibility, inclusion of all staff, inclusion of all financial and non-financial transactions, evaluation of the created internal control system at least once per year and determination of precautions to be taken, regulatory compliance, transparency, accountability, effectiveness and efficiency are determined as the main principles to be taken into consideration.

General framework of the internal control systematic is determined by legal regulations. Ministry of Finance has established a guide about how to build an internal control system and make it function. However, since internal control is a new term and there is no experienced staff together with the lack of application examples, studies in this area are needed to be realized.

In this thesis study, it is aimed to give an applied study approach to create an internal control system and sustain it in public institutions. The study comprises the following phases: View of legal regulations, literature research, model creation, application of model in a public institution and evaluation of results.

We may divide evaluation part into two following subparts: Difficulties and limitations faced during the study and evaluation of the results and suggestions.

Difficulties and Limitations Experienced:

- a) The framework of internal control is already determined by legal regulations.
- b) There is no previous application of internal control in public institution and therefore no organizational structure, tasks, authorities and responsibilities are uncertain.
- c) Uncertain position of internal control system in institutional management system and poor definition of its relation to other managerial systems
- d) Terms related to internal control are quite new and there is low awareness.
- e) There is lack of experienced staff
- f) -Managerial unit sees the study as a legal obligation, does not believe in its necessity and does not support it.
- g) There is a low rate of authorization of staff
- h) Lack of motivation due to low encouraging of staff
- i) Focusing generally on problems instead of potential risks in risk determination studies
- j) Evaluation of Study Results and Suggestions:

To build the risk management systematic and apply it, managerial level's contribution is necessary and important. Therefore, it is suggested that management level should motivate staff.

It is suggested that for the sake of sustaining the study and making it one's own, it necessary to give roles and responsibilities to all people and seek contributions of all of them

Risk statements are determined by experts who have experience and knowledge about the process. Risk determination studies are tried to be made such that they eliminate any uncertainties in risk

determination. In looking at the study results, however, it is seen that experienced problems and issues were identified as risk. The reason for this is determined as the failure of control environment to fit into standards, to which a conformance is achieved after an control environment analysis. Therefore, it is suggested to conduct control environment analyses and to make action plans to conform to standards before institutional risk evaluation studies.

It is determined that the control activities developed against the risks should be applicable in the short term and should directly be associated with the related risks.

It is suggested to build the monitoring and control systematic and make it function by determining the responsible staff of control activities and their realization times.

For the sake of sustainability, it is suggested to periodically report the monitoring and control studies and present them to managerial level.

In most of the institutions it is determined that institutional risk management is seen as a one-time study. It is required to regularly repeat these studies each year and update them. It is therefore suggested to build the institutional risk management process and realize the activities in the sense of process management.

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ANNEXES

ANNEX 1 Questions of Current State Analysis

Standard	General Conditions	Expert Questions	Question of Employees
Standard: 1. Ethical values and Honesty It shall be provided the behaviours that characterize staff to be known by the staff	1.1. Internal Control System and process shall be owned by the manager and staff and shall be supported.	Internal control system and proceeding shall be owned and supported by the managers and staff.	I do believe that internal control is beneficial to the enterprise.
	1.2. Managers of the Administrative Authority shall be model sample in the application of internal control.	The managers of the Administrative Authority shall be model sample to the staff.	My Manager shall be role model to me in internal control systems' applications.
	1.3. Ethical rules shall be known and in all activities these rules shall be obeyed.	In ethical subjects I do apply to the staff who assists and shows the direction.	Generally the things that enterprise managers state that they are ethical and what the do are consistent.
		Staff is informed about "Ethical Council Application and Ex Officio Examination Terms and Conditions". For this it can be reached to information.	Ethical decisions takne are considered by the superiors and shall be appreciated.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Conditions	Expert Question	Employee Question
Standard: 1. Ethical values and Honesty It shall be provided the behaviours that characterize staff to be known by the staff	1.3. Ethical rules shall be known and in all activities these rules shall be obeyed.	"Public Officers Ethical Behaviours Principles and Application Terms and Conditions Regulations " are known.	There shall be ones punished as a warning regarding ethical behaviours.
		"Public Officers Ethical Behaviour Principles and Application Terms and Conditions Regulation " is applied in our enterprise.	Enterprise is subjected to auditing with its staff and departments periodically.
		I consider in general my enterprise ethical.	To the ones working inside the enterprise there is staff to assist and show direction in ethical subjects to unit/staff.
		Inside and outside the enterprise there are proper ways to detect the concerns about the ethics (favoritism, sex discrimination, race discrimination, bribery, individual benefits, etc.).	I do apply to the staff in ethical subjects to the staff that shall assist and shows the directions.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 1. Ethical values and Honesty It shall be provided the behaviours that characterize staff to be known by the staff	1.3. Ethical rules shall be known and in all activities these rules shall be obeyed.	Enterprise according to the characteristics of the service and duty that it shall execute arranged the "Enterprise ethical behaviour principles".	I do consider my enterprise in general ethical.
		Enterprise employee or officer in every level, as a part of the conditions of recruitment shall be informed about the ethical behaviours and about the responsibilities towards these principles.	There is a general understanding related to the shared values in enterprise and regarding the appropriate behaviour.
		Enterprise managers, shall provide the "Ethical Behaviour Principles", to be located into the training programs. (basic training, preparation training, in-service training)	Enterprise possesses written ethical rules.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert question	Employee question
Standard: 1. Ethical values and Honesty It shall be provided the behaviours that characterize staff to be known by the staff	1.3. Ethical rules shall be known and in all activities these rules shall be obeyed.	Ethical rules inside the enterprise are integrated into staff awarding/punishment system (promotion, discipline.).	Ethical rules inside the enterprise, shall be used in staff awarding/punishment system (promotion, discipline.)
	1.4. Honesty, transparency and accountability in activities shall be provided.	Honesty, transparency and accountability in activities shall be provided	-
	1.5. Just and equal behaviours shall be shown to the staff and service providers of the Administrative Authority.	Performance of the employees are evaluated in a just way.	My performance is evaluated in a just way.

ANNEX 1 Questions of Current State Analysis (continue)

Standard: 2. Mission, organization structure and duties administrative authorities missions and units and staffs duties shall be outlined in written form , shall be declared to the staff and a proper organizational structure in administrations shall be generated..	2.1. Mission of the Administrative Authority shall be outlined in written form, shall be declared and shall be protected by the staff.	Mission is defined.	I do recognize the missions, remember it, I can write it.
		Mission is up to date.	I do attribute to the mission to myself, I accept it and I protect it.
		Mission is shared with the staff.	-
		Mission is adopted by the staff.	-
	2.2. To provide the mission to be realized Administrative Authority units and sub units targets to be executed shall be defined in written form and shall be declared.	In order to realize the mission Administrative Authority Units Subunits targets to be executed shall be defined in written form and shall be declared.	-
	2.3. In Administrative units Duty Distribution Charts shall be generated and declared to the staff that outlines the staff duties and related authorizations and responsibilities.	Actually defined works analysis shall be done.	My duty definition has been done obviously.
		Duties and Duty distribution chart that presents the duties and responsibilities of the Staff is generated.	I do know the duty definition.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Conditions	Expert Question	Employee Question
Standard: 2. Mission, organization structure and duties administrative authorities missions and units and staffs duties shall be outlined in written form , shall be declared to the staff and a proper organizational structure in administrations shall be generated..	2.3. In Administrative units Duty Distribution Charts shall be generated and declared to the staff that outlines the staff duties and related authorizations and responsibilities.	Documented authorities shall be used de facto.	I have been informed regarding amendments in duty definitions.
		Duty definitions have been done.	My personal rights have been defined.
		Duty definitions are clear.	-
		Employees do know their duties and their definitions.	-
		Amendments in Duty definitions shall be declared to the staff.	-
		Duty definitions shall be amended with the contribution of the employees.	-
		Position rights have been defined.	-

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 2. Mission, organization structure and duties administrative authorities missions and units and staffs duties shall be outlined in written form , shall be declared to the staff and a proper organizational structure in administrations shall be generated.	2.4. Administrative Authority and its Units shall possess Organizational Chart and depending on this the functional target distributions shall be identified.	Sub units possess organization charts.	I can reach the organization chart easily.
		Organization charts are in updated conditions. Organizational charts are updated in a regular manner.	I do know my positions and its interrelations and its position among the other positions.
	2.4. Administrative Authority and its units shall possess Organizational Chart and depending on this functional distributions of duties shall be defined.	Employees shall reach to the Organization chart easily.	I do know the superior of the department that I am working in.
		Interrelations of the positions have been defined.	-
		The superior connected to the positions have been defined.	-
	2.5. Administrative Authority and its units' organizational structure shall be in such a form to present the main duties and responsibilities, accountability and appropriate reporting relationship.	Functional duty distribution has been determined.	-
		Team- Group- Commisisions that the duties have been obtained are defined.	Groups and commissions that I am working for are defined.(If there is a duty)

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 2. Mission, organization structure and duties administrative authorities missions and units and staffs duties shall be outlined in written form , shall be declared to the staff and a proper organizational structure in administrations shall be generated.	2.5. Administrative Authority and its units' organizational structure shall be in such a form to present the main duties and responsibilities, accountability and appropriate reporting relationship.	Organizational Chart matches to the works' real process.	Organizational Chart matches to the real process of the works.
		The employee perspectives regarding the future amendments in Organization Chart shall be taken into consideration.	I have been asked for the amendments in Organizational Chart.
		Reporting works synchronized with the organizational chart. (signature process)	Organization Chart involves the reporting relationship. Information – document- order flow work according to the defined Chart.
	2.6. Administrative authority managers shall identify the procedures regarding sensitive duties for the execution of the activities and shall declare to the staff.	Managers of the administrative authority, shall define the procedures regarding sensitive duties for the execution of activities and shall declare to the staff.	-

ANNEX 1 Questions of Current State Analysis (continue)

Standard: 2	2.7. Managers in every level shall generate mechanisms to monitor the results of the given targets.	Managers in every level shall generate mechanisms to monitor the results of the duties.	Management uses such methods to observe the results of the duties that assigned to me.
		There is a software to follow up the targets.	-
Standard: 3. Performance and sufficiency of the staff: Administrative Authorities shall supply the convenience between staff efficiency and duties, and need to take necessary precautions for this.	3.1. Human resources management shall be in such a form that it supports the administrative authorities aims and targets.	Via executing Norm staff works, staff necessity has been calculated.	-
		Absence ratios and resigning ratios are being calculated. (Work power cycling rate)	-
		Appropriate human resources applications shall be executed according to the Enterprise aims and targets.	-
	3.2. Administrative authorities managers and staff are required to possess necessary information, experience and skills to perform their duties in an effective way.	Managers shall possess knowledge, experience and skills to perform their duties in an effective way.	My manager possess knowledge, experience and skills to perform the duties in an effective way.

ANNEX 1 Questions of Current State Analysis (continue)

Standard: 3. Performance and sufficiency of the staff: Administrative Authorities shall supply the convenience between staff efficiency and duties, and need to take necessary precautions for this.	3.2. Administrative authorities managers and staff are required to possess necessary information, experience and skills to perform their duties in an effective way.	Employees shall possess knowledge, experience and skills to perform their duties in an effective way	My colleagues possess knowledge, experience and skills to perform the duties in an effective way.
	3.3. Professional sufficiency is required to be taken into consideration and for every duty appropriate staff shall be chosen.	Appropriate staff is recruited for the job (professional efficiency etc.).	Recruitment is done in an objective manner.
		Recruitment is done within the frame of the objective measures.	
	3.4. Recruitment of the staff and promotion in their duties merit principle shall be followed and individual performances shall be taken into consideration.	Employees are promoted according to their performance.	I get promoted according to my performance.
	3.5. For each type of duties necessary training requirements shall be determined, training activities to adjust this requirement shall be planned annually and executed and if necessary updated.	If the employees working on performance system basis lacking knowledge training activities are executed.	There are opportunities for further training when I need regarding the fields necessary for my work.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 3. Performance and sufficiency of the staff: Administrative Authorities shall supply the convenience between staff efficiency and duties, and need to take necessary precautions for this.	3.5. For every type of duties necessary training requirement shall be determined, training activities to adjust requirement shall be planned annually executed and if necessary updated.	Trainings are given according to carrier planning system.	-
		In new organizational structuring trainings are given.	-
		Orientation works are done to supply the convenience of the new applicants.	-
		For training activities annal plans are prepared and if necessary they are updated.	-
	3.6. Sufficiency and performance of the staff shall be assessed at least once in a year and the evaluation results shall be interviewed with the staff.	Efficiency of the staff and performance relation shall be evaluated at least once annually.	Performance shall be evaluated at least once in a year.
		Performance evaluation results shall be interviewed with the staff.	I will get feed backs about my performance.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 3. Performance and sufficiency of the staff: Administrative Authorities shall supply the convenience between staff efficiency and duties, and need to take necessary precautions for this.	3.7. According to the performance assessment for the staff that possesses insufficient performance necessary precautions are taken, awarding mechanisms for high performance shall be developed.	Enterprise managementto the employees (positive or negative) shall give regular feed back and supports them to improve their performances.	Enterprise management support me (positive or negative) with regular feed backs to improve my performance.
		Employees are awarded according to their performances.	I am awarded according to my performance (appreciation, promotion...).
	3.8. Elements significant related to Human Resources Management as Staff recruitment, relocation, assignment to superior duties, training, performance assessment, personal rights shall be identified in a written formand shall be declared to the staff.	Recruitment process is defined.	Steps followed in recruitment and assessment criteria are clear to me.
		Recruitment system is transparent.	My carrier plan has been done within the frame of my expectations from the future.

ANNEX 1 Questions of Current State Analysis (continue)

Standard	General Condition	Expert Question	Employee Question
Standard: 3. Performance and sufficiency of the staff: Administrative Authorities shall supply the convenience between staff efficiency and duties, and need to take necessary precautions for this.	3.8. Significant elements related to human resources management Staff recruitment, relocation, assignment to superior duties, training, performance assessment, personal rights shall be defined in written form and shall be declared to the staff.	For positions career plans are defined.	There is a system where my individual performance is evaluated.
		Relationships between the positions and the assignment of these peoples when, to which positions, and possesses what type of knowledge and skills	
		Carrier plans are generated according to the requests of the employees.	-
		Relocation procedures of the employees are defined in written form.	-
		There is an individual performance asswessment system.	-
		Recognition/ appreciation/ promotion system exists.	-

ANNEX 1 Questions of Current State Analysis (continue)

Standard: 4. Subsidiarity Limits of Authority and Subsidiarity in Administrative Authorities shall be defined clearly and shall be declared in a written form. Subsidiarity shall be done so taking into consideration the significance and risk of the subsided authority.	4.1. Signature and approval periods in work flow processes the authorities shall be defined and declared to the staff.	Signature and approval authorities in work flows are determined.	I know the signing and approval authorities in work flow.
		Signature and approval authorities in work flows are declared to the staff.	I know all my signature and approval authorities.
	4.2. Subsidiarities shall be determined and declared to the related authorities so within the frame of the conditions defined by superior manager that indicates the limitations of the authority in written form.	Limitations in enterprise regarding subsidiarity are determined obviously.	I know whom I transfer my authority, in which way and in which limitations.
		Subsidiarity is done in written form.	I have been informed about subsidiarity.
	4.3. Subsidiarity shall be convenient with the subsided authority significance.	Employees are informed about the subsidiarity.	-
		Subsidiarity shall be done taking into consideration the significance, risk of the authority.	-

ANNEX 1 Questions of Current State Analysis (continue)

Standard: 4	4.4. Subsidized authority staff shall possess the knowledge, experience and skills that the position requires.	Staff that undertake the authority possesses the knowledge, experience and skills that the position requires.	-
	4.5. Subsidized authority staff, shall inform the authority to assign this authority in periodical intervals, and the one who assigns this authority shall seek this information.	Staff that the authority has been assigned, shall inform the authority in periodical intervals about the execution of the authority.	I do have information flow with the staff that I assigned (or I have been assigned) authority in periodical intervals.

ANNEX 2 Enterprise Risk Assessment Chart

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Regulation	1	Coming short the increasing capacity requirement with the addition of new residence areas to duty frame	4	3	12	Medium	10
	2	Existence of more than one regulation and frequent amendments thus existence of variations	4	2	8	Medium	
	3	Legal arrangements do not fulfill the requirements	5	2	10	High	
Law	4	Legal staff is insufficient qualitatively and quantitatively	2	3	6	Medium	7,5
	5	Prolongation of written communications, processes take very long time and because of careless prepared information sets legal losses arise	3	3	9	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Main Activity Field of Enterprise	6	Because of Improvement and Increasing population in region it is not possible to adjust the required water quantity	5	3	15	High	15
	7	Drinking water basins and sources are not protected and cannot be controlled	4	2	8	Medium	
Main Activity Field of The Enterprise	8	Insufficient capacities of treatment plants	5	1	5	Medium	15
	9	Since drinking water distribution lines are constructed as reinforced concrete and single lines a main malfunctioning or problem water service is not provided continuously	4	2	8	Medium	
	10	Non-renewed main distribution lines malfunctioning	4	2	8	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Main Activity Field of The Enterprise	11	Apart from the risks that the shortages of canalization system will generate from health aspect, since the actual canalization infrastructures current load will confront more load the service will be hindered, this will lead to health and environmental health problems	5	3	15	High	15
	12	In excavations there will be damages to enterprise infrastructure and the services will be interrupted and hindered	4	3	12	Medium	
	13	As a result of data shortages and current datasets bad quality related to the enterprise infrastructure planning, repair and maintenance for infrastructure and other activities shall not be executed in an effective way	3	4	12	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Main Activity Field of The Enterprise	14	More waste water is generated that the predicted	4	2	8	Medium	
	15	AS a result of leaving the waste water to environment outside the frame of the standards generation of environmental pollution and increasing in ratios of diseases	5	3	15	Yüksek	
	16	Correct usage of water, for canalizasyon, house and environmental wastes unconsciousness shortage and thus insufficient usage of current sources.	4	3	12	Orta	
	17	In enterprises where infrastructure services are offered lack of coordination and that's why extensions in the project durations	3	3	9	Orta	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Significant Projects towards Enterprise Infrastructure	18	As a result of the fact that infrastructure requirement is not determined correctly cost effective investment projects shall not be realized	4	3	12	Medium	12
	19	Arising from the delays of expropriation process it shall not be possible to complete the projects on time as it was predicted	3	4	12	Medium	
	20	Because of the problems of getting permissions for the Infrastructure projects it shall not be possible to complete the projects on time	3	4	12	Medium	
	21	Projects shall not reach their predicted targets because of the shortage of technical and qualified staff	3	3	9	Medium	
	22	A wrong choice of contractor	4	2	8	Medium	
	23	Delays arising from the Public Tender Processes	3	4	12	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
	24	Due to the fact that contractor shall not fulfill the duties completely and on time	4	2	8	Medium	
Information Systems	25	Corruption of Information System infrastructure	5	2	10	High	9,4
	26	Since there is no integrated, complete enterprise source planning system	3	5	15	High	
	27	There is no disaster center within the enterprise	5	1	5	Medium	
	28	Shortage of technical and qualified staff	3	3	9	Medium	
Human REsource	29	Shortage of technical and qualified staff	3	2	6	Medium	11,4
	30	Existence of staff that execute the same type of work in different categories that possess different personal rights	4	3	12	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Human Resource	31	Staff recruitment process does not satisfy the enterprise needs effectively	3	3	9	Medium	
	32	Arising from working with missing staff increasing of the workload of the staff	4	3	12	Medium	
	33	Because of the lack of Human Resources Management System prevention of significant source of men to be managed effective and sufficient	4	4	16	High	
	34	Labor Safety –Labor Health work insufficiency	4	2	8	Medium	
Physical Resources	35	Because of the insufficiency of the working area decrease of staff satisfaction level	3	4	12	Medium	11
	36	Shortage of coordination in enterprises' different units activities	2	5	10	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Financial Resources	37	Difficulties in collection of user incomes	4	1	4	Medium	7,3
	38	Attacks against cash desks	3	2	6	Medium	
	39	Paid indemnities to be paid in negative cases	3	4	12	Medium	
Repair & Maintenance	40	Shortage of technical and qualified staff	3	2	6	Medium	8,6
	41	Risks during the supplying fuel oil	4	2	8	Medium	
	42	Problems during supplying spare parts and the prolonging of supplying time	3	3	9	Medium	
	43	Problems arising from the contractor choice and problems in supplying process	4	3	12	Medium	
	44	Maintenance and repair equipment, tool, and equipment insufficiency	4	2	8	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Security	45	Facing with natural disasters	4	2	8	Medium	9,2
	46	Outbreak of war	4	2	8	Medium	
	47	On the condition to be subjected toTerror and sabotage being harmed of the enterprise infrastructure and facilities	4	3	12	Medium	
	48	On the condition to be subjected to ordinary crimes damaging of enterprise facilities and hindering in enterprise services	3	3	9	Medium	
	49	The case that enterprise facility and infrastructures physical securities and shall not be supplied, the case that network shall not be protected, water becomes dangerous via different substances and security malfunction	3	3	9	Medium	
	50	Security equipment tools and insufficiency of equipments	3	3	9	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Internal Shareholders	51	Dissatisfaction of employees	4	3	12	Medium	11
	52	Effective communication shortages in internal enterprise	4	3	12	Medium	
	53	Enterprise intern effective cooperation shortage	3	3	9	Medium	
External Shareholders	54	Dissatisfaction of service buyers benefiterers	2	3	6	Medium	8,25
	55	Interenterprise ineffective communication	3	2	6	Medium	
	56	Interenterprise ineffective cooperation	4	3	12	Medium	
	57	Interenterprise information exchange problems	3	3	9	Medium	

ANNEX 2 Enterprise Risk Assessment Chart (Continue)

Category	Risk No	Risk Definition	Risk Effect Value	Possibility	Risk Score	Risk Class	Category Risk Score
Strategic Planning	58	Kurumun stratejik amaçlarının gerçekleşmemesi	4	2	8	Medium	10,5
	59	Enterprise purposes does not involve enterprise mission and vision	3	2	6	Medium	
	60	Enterprise strategic targets does not explain enterprise strategic purposes	4	3	12	Medium	
	61	Performance indicators does not explain related strategic targets	4	4	16	High	

ANNEX 3 Controlling Activities

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Regulation	1	With the addition to duty frame new residences capacity increases and needs cannot be fulfilled	Medium	Smoothing of the effect	Possible participation areas shall be analyzed and master plan shall be done..
	2	The case that there are more than one regulations and frequent amendments that lead to variaties	Medium	Acceptance of the Risk	-
	3	Legal arrangements does not fulfill the requirements	High	Smoothing of the Risk	Seminars, conferences are arranged regarding the subject where enterprise perspective and advices shall be explained that lead to supports in works.
Law	4	Law staff s insufficient both qualitatively and quantitatively	Medium	Smoothing of the Risk	For the improvement of current staff qualitatively service intern training programs shall be arranged.

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
	5	Prolongation of written communications, prolongation of processes and careless prepared information sets and legal losses	Medium	Remdiation Avoidance	Processes shall be defined obviously and documents shall be filled correctly and a training with such a content shall be given regularly to the staff and newly attending stuff
Main Activity Fields of Enterprise	6	Because of the development and increasing population in region the requirement of water shall not be supplied	High	Smoothing of the effect	Awarenes in consumer shall be established for the effective use of water through information conferences. Related with alternative water supplies systematic works shall be executed.
	7	Drinking water basins and resources shall not be protected and controlled	Medium	Smoothing of the effect	Society shall be informed about the usage of water resources. Control mechanisms will be increased.

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
	8	Treatment facilities are insufficient	Medium	Smoothing of the effect	Capacities of the treatment facilities will be increased and new facilities according to master plana will be founded.
	9	Drinking water distribution lines are constructed from reinforced concrete and as single lines a malfunctioning or problem water distribution services are hindered	Medium	Smoothing of the effect	Reinforced concrete distribution lines will be changed with robust material and supplementary lines construction will be foreseen with a feasibility work and according to the results of the studies cost benefit analysis shall be executed and a decision shall be made successively.
	10	Non-renewed main distribution lines are broke down	Medium	Smoothing of the effect	Repairs and maintenances in main distribution lines will be increased and renewed.

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Main Activity Fields of Enterprise	11	Apart from the shortages in infrastructure from health perspective current canalization systems load has extra load and this leads to hindering of service, health and environmental health problems	High	Remediation Avoidance	Execution of maintenance on time, determination of channels according to their construction dates regarding the renovation required ones, and within the frame of a plan renovation works shall be executed.
	12	In excavations enterprise infrastructures are damaged and this leads to prevention of services and hindering of services	Medium	Remediation Avoidance	Infrastructure maps shall be extracted and will be shared with shareholders.
	13	Related with the enterprise infrastructures as a result of data shortages and actual datasets bad quality planning, maintenance, repairing and such activities shall not be executed properly	Medium	Smoothing of the effect	Grouping the datasets in such a form that possesses an infrastructure type base functional characteristic and standardized, current datasets shall be processed and organized, datasets shall be prepared for use for the users.

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Reponse	Control Activities
	14	More waste water is generated than it was predicted	Medium	Smoothing of the effect	
	15	As a result of leaving the waste water to environment more outside the limits of the standards generation of environmental pollution and increasing of diseases	High	Remediation Avoidance	Waste water zones shall be controlled continuously, samples shall be taken and be subjected to tests.
Main Activity Fields of Enterprise	16	Correct usage of water, canalization, within the frame of house and environmental wastes with the lack of consciousness and ineffective usage of current resources.	Medium	Smoothing of the effect	Posters, spots, conferences, seminars etc. activities shall be arranged to explain the right usage of water,
	17	Arising from the lack of coordination in infrastructure service enterprises prolongation of project durations	Medium	Smoothing of the effect	Before the big investment projects coordination meetings shall be done,twice a year information sharing meetings shall be done

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Reponse	Control Activities
Significant Projects Towards Enterprise Infrastructure	18	As a result of wrong determination of infrastructure requirement investment projects are not cost effective	Medium	Remediation Avoidance	For the determination of necessities in a dynamic structure requirement determination metrics and/or models shall be developed these shall be used in requirement determination period
	19	Arising from the delays in expropriation periods projects are not completed on the right time they are predicted at the beginning	Medium	Acception of Risk	-
	20	Because of the problems for taking the permissions for infrastructure projects projects are not completed on time	Medium	Acception of Risks	-
	21	Projects do not reach their predicted targets because of the shortage of technical and qualified staff	Medium	Remediation Avoidance	Work analysis execution related to staff position that will work on projects and determination of qualifications of staff according to work needs

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Reponse	Control Activities
Significant Projects Towards Enterprise Infrastructure	22	Wrong choice of contractor	Medium	Smoothing of the effect	Preliminary technical terms of references shall respond the requirements.
	23	Delays arising from Public Tender Process	Medium	Acception of Risks	-
	24	The situation that contractor shall not fulfill its responsibilities completely and on time	Medium	Smoothing of the effect	In contracts there shall be punishments.
Information Systems	25	Corruption of the Information System Infrastructure	High	Smoothing of the effect	Detailed risk analysis shall be executed towards informatics infrastructure and according to analysis results risk prevention plan shall be prepared

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Reponse	Control Activities
	26	There is no integrated, complete enterprise resource planning system	High	Smoothing of the effect	Information exchange necessities of enterprise units and decision support system requirements shall be determined and necessity definition documents shall be prepared
	27	There is no disaster center within the enterprise	Medium	Smoothing of the effect	Initiating the studies to establish disaster center
	28	Shortage of technicals and qualified staff	Medium	Remediation Avoidance	Execution of analysis to work in projects according to staff position execution of work analysis and determination of staff qualifications according to work necessities

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Reponse	Control Activities
Human Resources	29	Shortage of technical and qualified staff	Medium	Remediation Avoidance	Improvement of current staff qualitatively and for this execution of work internal training programs.
	30	There are staff doing the same work in different categories that posses various personal rights	Medium	Remediation Avoidance	Execution of work analysis, execution of work evaluations within the frame of determined factors,according to this determination of fees, removing the status differences
	31	Staff recruitment period does not match to fulfill enterprise needs effectively	Meidum	Remediation Avoidance	Detecting the problem zones, determination of precautions to be taken, definition of staff recruitment
	32	Arising from working with missing staff increasing of the workload of staff	Medium	Remediation Avoidance	Execution of work analysis, work loads, norm staff analysis

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Human Resources	33	Because of the lack of Human Resources Management System prevention of the management of men effectively and sufficiently which is the most important source	High	Smoothing the effect	Determination of Human Resources strategy for the enterprise, execution of requirement analysis, preparation of the document with the requirement definition
	34	Insufficient Labor safety, Labour health works	Medium	Smoothing the effect	Activation of the unit to execute Labour safety – labour health activities
Financial Sources	35	Because of the negativenesses of the working environment decreasing of staff satisfaction level	Medium	Remediation Avoidance	A work according to the negativenesses in working environment shall be done, regarding the headers come out of discussion a preventive planning need to be executed and the prepared plan shall be applied

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
	36	Lack of enterprises' different units executed activities	Medium	Remediation Avoidance	For the enterprise to work as a whole providing a building in required sizes and the separation is to be avoided
Financial Sources	37	Incomes can not be collected from the users	Medium	Smoothing of the effect	Increasing the sanctions for users that do not realize control mechanisms and payments
	38	Attacks against the cash desks	Medium	Smoothing of the effect	Increasing the security precautions
	39	Indemnities to be paid in negative conditions	Medium	Remediation Avoidance	Detection of negative cases that we paid indemnities according to years, detection of datasets, analysis, taking the preventive precautions

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Maintenance and Repair	40	Shortage of technicals and qualified staff	Medium	Smoothing of the effect	For the actual staff to be improved qualitatively work intern training programs have been arranged.
	41	Risks to be confronted in fuel oil supplying	Medium	Smoothing of the effect	Preliminary prepared pre tender technical terms of references preparation according to necessities.
	42	During the spare part supplyinh period because of the the problems prolonging of process	medium	Remediation Avoidance	Detection of problems, classification according to source, determination of solution alternatives, taking the necessary preventive precautions and application

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Maintenance and Repair	43	Problems arising from contractor choice and hindering of supplying process	Medium	Remediation Avoidance	Identifying the problems, classification according to source, determination of solution alternatives, updating of contractor choice process
	44	Insufficiency of repairing and maintenance regarding equipment, tool shortage	Medium	Remediation Avoidance	Making the detection of requirement and supplying
Security	45	Facing with natural disasters	Medium	Smoothing of the effect	After natural disasters making action plans and making preparations in applications
	46	Outbreak of war	Medium	Smoothing of the effect	Action plans shall be established and preparations shall be done via applications

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Defintion	Risk Class	Risk Response	Control Activities
	48	On the condition to be sunjected to ordinary crimes damaging of enterprise facilities and hindering of the given service	Medium	Remediation Avoidance	Detection of possible events and their risks, preparation of Plans against terror and sabotage, execution of operations about the plans
	49	Not providing the security of facility and infrastructure within enterprise, not protecting the networks, making the waters with various reasons dangerous and many other security gaps	medium	Smoothing of the effect	Execution of analysis for the positions of the staff to work in security projects and determination of the qualifications according to the characteristics of the work
	50	Insufficient security equipments and tools	Orta	Smoothing of the effect	Determination of materials and tools shortages, expressing the problems arise from the shortages, developing the solution proposals

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activities
Internal Shareholders	51	Disstisfaction of the employees	Medium	Remediation Avoidance	Detection of problems, classification according to source, finding solution alternatives, taking preventive precautionsand application
	52	Lack of enterprise intern communication	Medium	Smoothing of the effect	Detection of problems, classification according to source, finding solution alternatives, taking preventive precautionsand application
	53	Lack of enterprise intern effective cooperation	Medium	Smoothing of the effect	Detection of problems, classification according to source, finding solution alternatives, taking preventive precautionsand application

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activity
External Shareholders	54	Service buyers and benefitors dissatisfactions	Medium	Smoothing of the effect	Satisfaction analysis works situations to generate dissatisfaction shall be determined and necessary precautions shall be taken
	55	The situation that inter enterprise effective relations shall not be established	Medium	Remediation Avoidance	
	56	Supplying the effective cooperation among the enterprises	Medium	Smoothing of the effect	Detection of problems, classification regarding the source, identifying the solution alternatives, taking the preventive precautionsand application
	57	No exchange of Information among Enterprises	Medium	Smoothing of the effect	Detection of problems, classification regarding the source, identifying the solution alternatives, taking the preventive precautionsand application

ANNEX 3 Controlling Activities(Continue)

Category	Risk No	Risk Definition	Risk Class	Risk Response	Control Activity
Stratejik Planlama	58	No realization of the strategic targets of the enterprise	Medium	Smoothing of the effect	Relationship between Strategic targets and strategic purposes shall re-examined
	59	No covering of enterprise targets of enterprise mission and vision	Medium	Smoothing of the effect	Updating of mission and vision within the frame of new strategic
	60	No explanation of enterprise strategic targets	Medium	Prevention Avoidance	Strategic targets and purposes shall be updated regarding the new strategic plan
	61	Performance indicators do not explain the enterprise strategic targets	High	Prevention Avoidance	Relationship between the strategic targets and performance indications shall be re-examined

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