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RISK MANAGEMENT OF MUNICIPAL TURNKEY PROJECT

Case Evrostroi-S Company

Business Economics and Tourism

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ABSTRACT

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Project management is one of the most common approaches to business-to-business opportunities, and it is rapidly expanding. All project managers will face challenges during the project implementation; one of the biggest challenges is risk and uncertainty. In project management it is important to know how to address the challenges and manage risk in an effective way.

The intention of the thesis was to investigate the management of the project and its implementation. Also, this study identifies risks and difficulties that can be faced during the life-cycle of the project.

To get results and to achieve the aims of this research case study approach was used. The case was a turnkey project of an airport implemented by a Russian company called "Evrostroi-S". Evrostroi-S was a main contractor and was responsible for the negotiations, planning and executing the project of building an airport. This project was ordered by the municipality of Surgut city.

During the research a series of interviews were conducted with the main staff, the director of a company and the general project manager of the subcontracting firm. The interviews helped to gather qualitative data concerning project management, risks and problems of a turnkey project and how they were addressed. The responses were summarized and evaluated to give an overall picture about project implementation and main stages of project life-cycle. The identified risks concerned costs and financing; equipment construction; late deliveries and infrastructure problems; municipal inspections. Most of the problems were solved by negotiations and additional financing. Based on the responses it was possible to find the reasons of success of project management in general and the turnkey project in particular.

Keywords: Project Management, Turnkey Project, Municipal Project, Project Life-Cycle, Risk Management.

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Projektijohtaminen on yksi suurimmista lähestymistavoista business-to-business mahdollisuuksiin. Kaikki projektijohtajat kohtaavat vaikeuksia projektin toteuttamisessa; yksi suurimmista vaikeuksista on riski ja epävarmuus. Projektijohtamisessa on tärkeää tietää kuinka kohdata haasteet ja hallita riskit tehokkaasti.

Opinnäytetyön tarkoituksena oli tutkia projektin hallintaa ja sen toteutusta. Tutkimus myös tunnistaa riskit ja vaikeudet, joita voi ilmetä tämän projektin elämänkaaressa.

Tulosten ja tavoitteiden saavuttamiseksi käytettiin tapaustutkimusta. Tapaus oli ”Evrostoi-S”-yrityksen toteuttama lentokentän valmisprojekti. Evrostoi-S oli pääurakoitsija ja vastuussa neuvotteluista, suunnittelusta ja lentokentän rakentamisesta. Projektin tilasi Surgutin kaupunki.

Tutkimuksen aikana haastateltiin päähenkilöstöä, yrityksen johtajaa ja urakointiyrityksen projektijohtajaa. Haastattelut auttoivat keräämään kvalitatiivista tietoa projektijohtamisesta, riskeistä ja ongelmista valmisprojektissa sekä niiden käsittelystä. Vastaukset tiivistettiin ja arvioitiin kokonaiskuvaksi projektin toteuttamisesta ja vaiheista projektin elämänkaaressa. Tunnistetut riskit koskivat kuluja ja rahoitusta; tarvikerakentaminen; myöhäiset toimitukset ja infrastruktuuriongelmat; kunnallistarkastukset. Useimmat ongelmista oli selvitettävissä neuvotteluilla ja lisärahoituksella. Vastausten perusteella oli mahdollista selvittää projektijohtamisen sekä erityisesti avaimet käteen-projektin menestyksen syyt.

Avainsanat: Projektijohtaminen, Avaimet Käteen-Projekti, Kunnallinen Projekti, Tuotteen Elinkaari, Riskinhallinta.

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1. INTRODUCTION

Project management is one of the most common approaches to business-to-business opportunities, and it is rapidly expanding.

All project managers will face challenges during project implementation; the biggest challenges are risk and uncertainty. As one of their characteristics, projects are one-time events. That means that it is hard to anticipate all the problems that may occur and the outcome can be uncertain, this thesis will answer how to address the challenges and manage risk in an effective way.

During my practical training I was working in one of the subcontracting firms of Evrostroi-S, a geodesic company Geosfera. It was interesting how the whole project is carried out, what is the process of it. It was decided to focus on one of the company's most challenging projects, a turn-key project of an airport. This project was interesting because there were several attempts to build a new airport in Surgut, but only the project carried out by Evrostroi-S succeeded. So it was important to investigate what are the possible problems that may occur during such project and why Evrostroi-S was successful.

1.1 Aims of the thesis

A turnkey project involves delivery of a complete institution. In this case, the main contractor is responsible for negotiations, planning and executing the project of building an airport. This project is ordered by the municipality of Surgut city. While the subcontractors are involved, the seller has to get the project operational and hand it over to the buyer. The responsibilities of the seller normally include: basic design and engineering; supply of technology and know-how; supply of complete machinery and equipment; design and construction of civil works; supply and setting up of infrastructure needs; commissioning all institution's facilities up to the start-up stage.

In the past years there have been plans and attempts to build a new airport in Surgut, but Evrostroi-S was the first company to succeed. The intention of the

thesis is to investigate the management process of the project and its implementation. Also identify risks and difficulties that can be faced during the life-cycle of the project.

There are several objectives of the thesis. First objective is to analyse turnkey projects, their qualities and life-cycle, second objective was to describe risk management process during the project implementation and finally, to find out why the project was successful.

By reaching those objectives the thesis should combine studied theory with practical work. The thesis will also include international aspects, because during the project the company had to import materials and sometimes whole parts from international suppliers from Germany, Serbia, and Spain.

1.2 Limitations

The aim is to identify risks and problems of a turnkey project, and find the reasons for success. Therefore, this thesis does not go deeply into every aspect of project management process, it gives an overview of a project management process, project life cycle and describes risk management. Also, the research objective is to focus on a turnkey project and it only briefly describes other forms of projects.

Another limitation is that only qualitative method of research will be used, due to the nature of project management there are only few key people responsible for the project, so there were different types of interviews are conducted to reach the goal of the thesis. Also, to protect the business the list of respondents is excluded from the references, only work titles of the respondents are given.

1.3. Methodology

Both desk research and field research were carried out. Desk research is focused on examining the literature, articles and secondary data. Field research is conducted in a form of case study of “Evrostroi-S” company executing a turnkey project – building an international airport in Surgut, Russia. Qualitative research was conducted in the form of interviews; structured interviews were conducted

with Chief Engineer, Main Accountant, Deputy Director, Head of Economic-Planning department. A depth interview was carried out with a director of the company.

A series of interviews were conducted, preliminary and final. The received information was evaluated and is included in the thesis as a report.

2. PROJECT BUSINESS

This section of the thesis will provide the theoretical framework for the study. The main focus of this part is project business, so it will describe project management and identify types of projects and stages of project life cycle. Risk management as an important part of project management is also presented.

2.1 What is a project

Projects are omnipresent: they are everywhere, and they are happening all the time. Projects are the driving force for many organizations in most industries. Projects can be considered as the change efforts of society, and the pace of change has been increasing. Therefore, effectively and efficiently managing change efforts is the only way organizations can survive and grow in this modern world. Pharmaceuticals, aerospace, and IT all operate on a project basis and all are notable for technological developments that have changed the way we live and work. But not all projects have such a big scale. Also community fund-raises or political campaigns, the development of a new product, creating an advertising program, and training the sales and support staff to move and service a product effectively are all projects. The key notions of project are change— the creation of something new or different— and the fact that they have a beginning and an ending. (Dinsmore 2006)

Project, in context of a project business, can be defined as a complex transaction covering a package of products, services and work, specifically designed to create capital assets that produce benefits for a buyer over an extended period of time (Cova 2002, 3). The temporary nature of projects indicates a definite beginning and an end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists. (Frame 1995)

Projects exist to deliver a product or service that hasn't existed before. In this sense, a project is unique, even if something similar was done before; it is never completely the same.

It should be noted that a project, in general context: is a method which enables us to move from idea to action, structuring the various stages in that process; sets out to alter the (social) environment in which it is to take place; takes shape in a certain social, spatial and temporal context; has an educational dimension and enables people to learn by experiment; is the product of collective activity; unnecessarily involves evaluation, which establishes a link between idea and action. This means that projects have various typical features or characteristics. (see Szpotowicz 2008)

However, projects and non-projects should not be confused. The following cannot be considered projects: past activities which are repeated in exactly the same way on a regular basis; activities with no clearly defined goals; activities which can be repeated or transplanted anywhere at any moment; ongoing activities. (de Vilder 2008, 27)

So, as a result the main features of a project can be determined:

- Projects have a purpose: their purpose is to solve a "problem", and this involves analyzing needs beforehand.
- Projects are realistic: their aims must be achievable
- Projects are limited in time and are implemented in a specific place and context.
- Projects are complex
- Projects are collective, they are run by teams, involve various partners and cater for the needs of others.
- Projects are unique
- Projects always involve some uncertainty and risk.
- Projects can be assessed: projects are planned and broken down into measurable aims, which must be open to evaluation.
- Projects have distinct, identifiable stages. (de Vilder 2008, 29)

2.2 Characteristics of project business

While characterising project business, we should differentiate project business from consumer services and business-to-business transactions. However, project marketing lies closer to the industrial goods and services, also called business-to-business marketing, so it is more important to relate projects to industrial goods and services.

To explain characteristics of project business we can use a continuum table, with projects on one side and industrial services and products on another, using different dimensions and taking into account different degree of difference in such variables as unit or series size, size of demand, business relations, frequency of transactions, financial commitment and buying procedures. The continuum is described in table 1.

TABLE 1. Project Business Continuum (see Cova 2002)

PROJECTS	BUSINESS-to-BUSINESS SERVICES
FROM:	TO:
unit or very small series production	mass production
made-to-measure demand	standard demand
discontinuous supplier/customer business relations	continuous business relations
rare transactions between supplier and customer	rare transactions
very long-duration transactions (around 2-3 years)	short transaction
relatively formal buying procedures (especially with public markets)	more informal quotation requests
fragmentation of buying centres and sales centres into two multiorganizational groups	mono-organizational buying centres and sales centres

These characteristics show us that project marketing has its own unique characteristics that do not rely on classifications of industrial activities. While projects differ so much from business-to-business products, "they represent a major proportion of international trade and business activities. These activities range from subcontracting to turnkey projects with management or offset contracts." (Cova 2002, 4)

2.3 Types of projects

There are different project classifications, depending on what variables are considered most important. There is one of the simplest classifications of projects, that however, leads to an expanded listing of attributes or characteristics of the projects.

According to Cleland (2002, 91) there are three types of projects:

- *Product projects.* Projects that design, develop, and deliver a product as a result of the work effort. The customer for this project is typically an external stakeholder, who was contracted for the product to meet a specific need.
- *Service project.* Projects that plan, design, and deliver services to external customers. The customer has contracted for specific expertise that is not available in-house.
- *Continuous improvement projects.* Projects that are internal to the organization and result in process change. The customer is an internal manager, or group of managers, who wants to change the manner in which current operation occur.

The classification we are going to use is based on components, equipment and services that seller supplies with the project. There are four types of them: subcontracting projects, partial projects, package deals, turnkey projects, which is the type of our case-project; and turnkey 'plus' projects.

2.3.1 Subcontracting projects

First of all, a subcontractor is an individual or a company hired by a main or general contractor to perform a specific task as a part of the overall project.

When it concerns classical cases of domestic or international projects, one main contractor is selling a project to the buyer, but in most cases the main seller is not able to supply or manufacture all of the project parts himself and may purchase missing parts from other companies, that are called subcontractors. It is especially

common for international projects. Subcontractors may also have subcontractor of their own for their part parts of the project. The common examples of subcontractor work could be transportation, civil work or installation. (Cova 2002)

2.3.2. Partial projects

In general sense, a partial project is used when many different people are working remotely on a project. Utilizing a partial project, a project manager can divide up a large project among many suppliers or engineers without them having a copy of the entire project on their hands.

A project manager creates and sends partial projects to the individual engineers. The engineers make changes to and sign and seal files in these partial projects and send them back to the project manager. The project manager then incorporates these altered partial projects back into the main project. (Cova 2002)

In this type of a project the buyer is responsible for the assembly of the whole project, putting different parts together. He takes on the responsibility of coordination and integration of the total project. Meanwhile the suppliers independently market and supply different parts of the project directly to the buyer. Even though the contractors work on the project separately they still need to have some information about other parts and suppliers. Usually they would need to adapt their product/services to match with each other and the whole project; especially if they come from different countries and industries. (Cova 2002, 5)

2.3.3 Package deals

In case when a buyer needs a solution to some defined problem he orders a package deal, which may include a complete system, components, equipment, plus the know-how to handle the system assembly and maintenance. Service contract or insurance can be a part of a deal. The contractor may have some in-house services and also have long-term contractual or non-contractual suppliers

that deliver different parts of the package deal. Those suppliers may come from the domestic market of either the main contractor or the buyer.

As an example, many advertising companies offer package deals to their customers that include idea generation, production media selection, budgeting and implementation of an advertising campaign for a new product or service. The supplier company may already have some services, such as idea-generation and production, while other services, such as media, billboards, and have long-term contractual or non-contractual relationships with suppliers that work with them on a regular basis (Cova 2002, 6).

2.3.4 Turnkey projects

Turnkey project is usually described as a real estate development project in which the builder assumes all risk until a certain point has been reached, usually at completion of the project or where the building is ready for occupancy. Permanent financing by a take-out lender can be arranged at that point, provided certain conditions are met. Turnkey project is also a development in which a developer completes the entire project on behalf of a buyer; the developer turns over the keys to the buyer at completion. Many government-owned public housing projects are turnkey projects. A private developer undertakes all activities necessary to producing the project, including land purchases, permits, plans, and construction, and sells the project to the housing authority. (Business Glossary 2006)

So, in project management, turnkey project is large-scale project, such as the building of a manufacturing plant, where the supplier builds, installs, and tests production processes before handing the plant over. The plant is then ready to start ‘at the turn of a key’. In computing, the term is used to describe an IT system that is delivered and installed ready to run.

When the buyer needs a complete plant, factory or institution turnkey project is a solution. Then the main contractor is responsible for marketing, negotiation and setting up of the project – such as an airport, a hospital, an underground train system – while he may have subcontractors for some parts of the project. The

seller has to hand in the project to the buyer fully operational and working (Cova 2002, 8-7). This type of project is illustrated in Figure 1

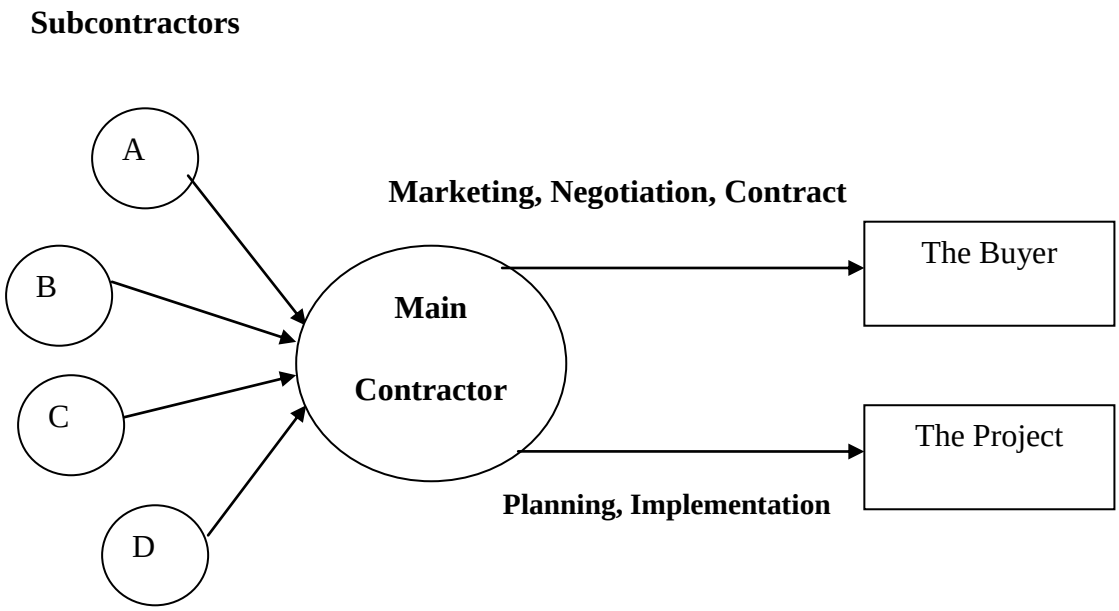

FIGURE 1. Turnkey Project (see Cova 2002, 8)

According to Luostarinen and Welch (1997), there are several components of the project that the seller normally has to take care of, such as:

- basic design and engineering;
- supply of technology and know-how;
- design and construction of civil works;
- supply and setting up of infrastructure needs;
- commissioning all plant facilities up to the start-up stage.

The main contractor is also responsible for the guarantees for the project. In many cases the companies, supplying different parts of the project could be in the same ownership group.

The project, when handed over to the buyer, is complete in every respect – equipment, services and even infrastructure involved. This feature of finished turnkey project distinguishes it from all other types of projects.

2.3.5 Turnkey 'plus' projects

Sometimes even a simple turnkey project may not be enough for a buyer. There are other activities and features that may be included in the project. Those activities may include anything from the project's inception, developing the idea together with the buyer or looking for financers to using the contractor's staff under management contract for the initial years after the completion of the project.

In such projects different types of buy-back and offset agreements are quite common, also, the bigger the project, the greater the demand from the buyer in this respect. This no longer a developing country phenomenon, most Western countries also demand some 'plus' in bigger projects.

2.4 Project management

Project management is a unique career and profession. Its origins can be traced back to efforts such as U.S. Department of Defense major weapons systems development, NASA space missions, and major construction and maintenance efforts, as well as comparable efforts in Europe. The scale and complexity of these efforts were the driving force in the search for tools that could aid management in the planning, decision making, and control of the multitude of activities involved in the project and especially those going on simultaneously.

Project management is a series of activities embodied in a process of getting things done on a project by working with project team members and other stakeholders to attain project schedule, cost, and technical performance objectives (Cleland 2002, 39). If there is a single word that characterizes project management, it is integration— to integrate this discipline with other driving factors within every organization.

Project management is a series of activities embodied in a process of getting things done on a project by working with members of the project team and with other people in order to reach the project schedule, cost and technical performance objectives, in other words it is dynamic process that utilizes the appropriate resources of the organization in a controlled and structured manner, to achieve some clearly defined objectives identified as strategic needs. It is always conducted within a defined set of constraints. (Cleland 2002, 39)

In order to better understand the management process, the term ’process’ should be defined. Process is a system of ongoing operations in the design, development, and production of something, such as a project consists of actions, changes, or operations that bring result, in case of a project managements reaching the objectives of technical performance, schedule, and costs. (Cleland 2002, 39)

Project management is a continuous process. Figure 2 describes a simple model of the management process and its major functions: planning, organizing, motivation, directing and controlling. Those functions are interdependent in the management process of a project. In the execution of planning the project's mission, objectives, goals, and strategies are determined. During the organizing function, the need for resources is determined and how those resources will be used to accomplish the project's goal. Motivation deals with human resources and workers' performance. Directing function stands for leadership of project manager and his interactions with project workers. Finally, in controlling the manager monitors, evaluates, and controls the effectiveness and efficiency in the utilization of project and human resources. (Cleland 2002, 40-41)

FIGURE 2. The management process (see Cleland 2002 40)

Project management is different than operations and technical management. Operations management can be characterized as managing the steady state. As soon as the operation is established, the concern is more with maintaining the operation in a production mode for as long as possible. Technical management tends to focus on the theory, technology, and practice in a technical field

concerning itself with questions of policy on strength of materials, safety factors in design, and checking procedures. (Dinsmore. 2006)

2.5 Project life cycle

The Project Life Cycle refers to a logical sequence of activities to accomplish the project's goals or objectives. Regardless of scope or complexity, any project goes through a series of stages during its life. Generally the project life cycle consists of four main stages: project initiation, project planning, project execution, project closure.

The first phase of a project is the initiation phase. At this point a business problem or opportunity is identified and solution for the problem is outlined, options for solving the problems are offered. Next, a feasibility study is carried out in order to investigate if option can address the business problem. After the recommended solution is approved, a project is initiated to deliver the approved solution. Terms of reference are completed outlining the objectives, scope and structure of the new project, and a project manager is appointed. The project manager should find the project team and establish a working plan. Approval is then sought to move into the detailed planning phase. (Westland 2006, 4)

Once the scope of the project has been defined in the terms of reference, the project enters the detailed planning phase. This, according to Westland (2006) involves creating a:

- project plan outlining the activities, tasks, dependencies and timeframes;
- resource plan listing the labour, equipment and materials required;
- financial plan identifying the labour, equipment and materials costs;
- quality plan providing quality targets, assurance and control measures;
- risk plan highlighting potential risks and actions to be taken to mitigate those risks; acceptance plan listing the criteria to be met to gain customer acceptance;
- communications plan describing the information needed to inform stakeholders;

- procurement plan identifying products to be sourced from external suppliers.

At this point the project will have been planned in detail and is ready to be executed.

During the execution stage all the previous approved plans are implemented. While each plan is being executed, a series of management processes are undertaken to monitor and control the deliverables being output by the project. This includes identifying change, risks and issues, reviewing deliverable quality and measuring each deliverable produced against the acceptance criteria. This step is followed by project closure, which releases the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources and communicating the closure of the project to all stakeholders. Very often a post implementation review is carried out. (Westland 2006, 5)

According to Cova (2002, 10-11) there are 10 stages in project life cycle:

- Identification of a need
- Pre-feasibility study
- Feasibility study
- Identification of potemtial sellers/buyers
- Tender/offer invitations
- Negotiations
- Planning and design
- Implementation works
- Test running
- Handing over

According to this approach to project life cycle, the buyer, in this case city municipality, first identifies the need for a project, when it is discussed and

accepted a pre-feasibility study is conducted, which means the logic, rationale and financial resources are reviewed, if everything is proven to be intact, real feasibility study is carried out, this study is usually done by the buyer. This stages helps the decision makers take a go/no-go decision. At this point the buyer also chooses the potential supplier or contractor that will be suitable for carrying out the goals. Sometimes tender is announced, sometimes potential suppliers are invited to give tenders or offers for the project. Buyers normally negotiate with more than one contractor and then award the project and sign an appropriate contract, depending on a type of a project. After that the contract is handed over to the designers and engineers so that they make plans and blueprints for the project and start the actual work. The main part is implementation works, which includes in itself execution, monitoring, evaluation, and control of the project. After the project is completed, it is tested and handed over to the buyer. (Cova 2002, 10-11) The life cycle is illustrated in Figure 3.

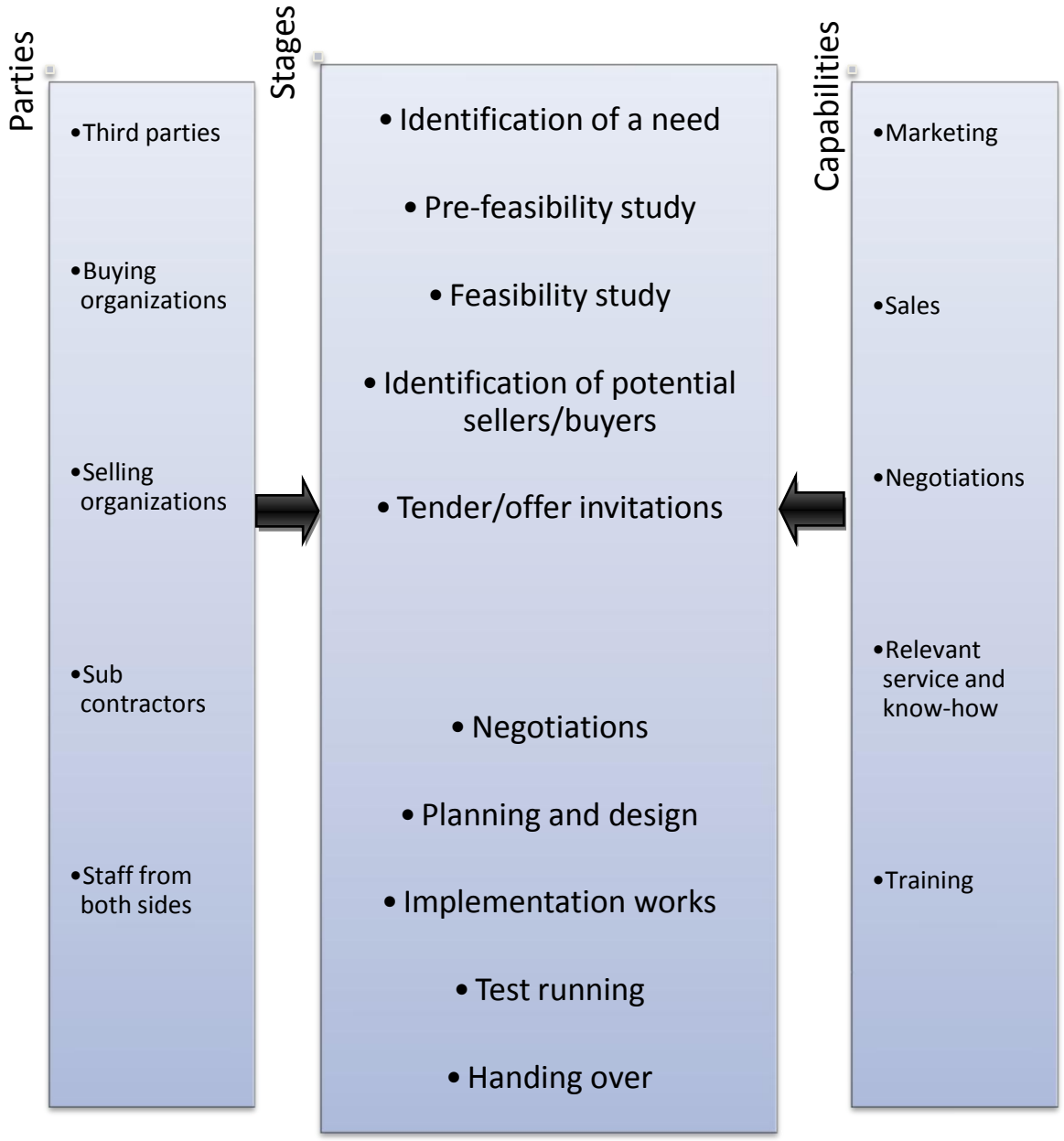

FIGURE 3. Project components in a traditional project (*Cova. 2002: 11)*

This research is focused on the problems and risks of the project, which occur mostly during planning and implementation stages, so it is necessary to focus on those two stages.

2.5.1 Project planning

Preparation of a project management plan is a simple, straightforward approach designed to promote and ensure comprehensive project planning. The project management plan is a combination of two plans that are often prepared separately: the traditional management plan, which describes operational management systems and approaches, and the project plan, which includes the work breakdown structure (WBS), logic, schedules, and cost estimates. Thus, they are more comprehensive than either management plans or project plans. They reflect awareness that the people, the system, and the detailed planning are all critical to project success. (Dinsmore 2005, 44)

Project planning is systematic sequencing and scheduling of the tasks comprising a project. During this process is it decided how the organizational resources can be best used and applied to suit the project's purposes. "It is a process of thinking through and making explicit the objectives, goals, and strategies necessary to bring the project through its life cycle to a successful termination when the project's product, service, or process takes its rightful place in the execution of project owner strategies." (Cleland 2002, 310)

Project planning is a rational decisional on how to initiate, sustain and terminate the project. Basic concepts of project planning are to develop a detailed plan, which would include the milestones, and the use of available tools for preparing and monitoring the plan. Project planning and controls are interrelated. Planning describes the path to be followed in executing the project, whereas the controls are the means to collect, analyze, compare and correct. Project controls are an integral part of project planning. (see McNeil 1986, 36; Cleland 2002, 310)

The main features of the project planning according to Cleland (2002, 342-343) are:

- Planning starts with the ability to sense and develop a vision involving the ability to see something that is invisible to others.
- Without a vision, the project may very well deteriorate and fail.

- A project goal is a milestone of the project.
- A project strategy is the design of means, through the use of resources, to accomplish end purposes.
- A project is more than a schedule and spending plan; it is an integrated effort to produce a product, service, or organizational process change.
- The quality and quantity of the organizational resources constitute the common denominator of planning, as well as the competencies of the enterprise and the projects involved in the enterprise.
- The roles of people regarding their project planning responsibilities are indicated.
- There are several specific project planning techniques
- The work breakdown structure (WBS) is the most basic consideration in project planning.
- An important part of project planning is a consideration for partnering and outsourcing.

Partnering in project management has emerged in recent years. One organization may initiate partnering to gain additional capability for a project as well as share in the risks of large complex projects. Partnering also includes combining the information, which usually regards research or development projects. Partnering may be conducted between public, private, and for-profit or non-for-profit organizations. A government agency may, for example, partner with a private organization to work on a project. There is no limit to project partnering by organizations and may take many forms of cooperative agreements formal or informal. A common goal and complementing capabilities are the basis for a project partnership. There are many benefits in partnering, such as learning from other company's management and technical processes, obtaining technical knowledge about project management methodologies and processes, improving productivity. (see Cleland 2002, 332-333, 337)

2.5.2 Implementation of a project

There are three major components of project implementations, project monitoring, project evaluation and control.

"The unexamined project is not worth much. No matter how perfect the plan, without regular reviews during the life of a project neither the project progress nor the reality of the plan can be assessed. Control is one of the key functions of the management process". (Cleland 2002, 377)

Control is the process of monitoring, evaluating, and comparing planned results with actual results to identify the progress toward the project cost, schedule, and technical performance objectives, as well as the project's "strategic fit" with company's purposes. During this process there are several steps, which are management functions of control; they are illustrated in Figure 4 (Cleland 2002, 338)

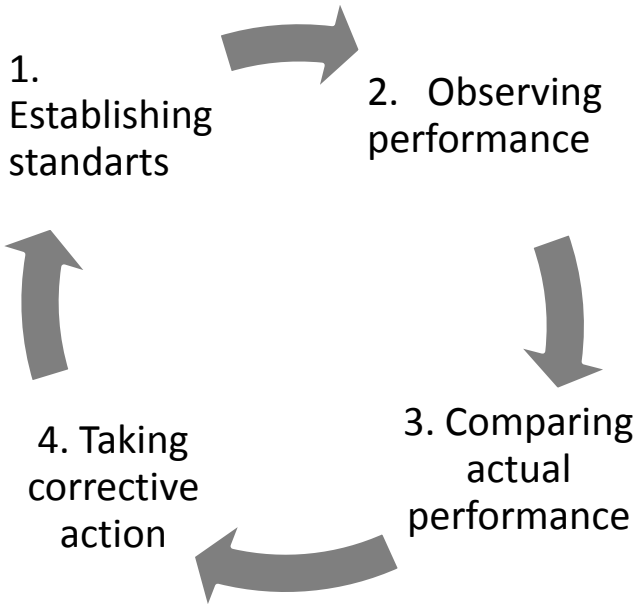

FIGURE 4. Control cycle model (Cleland 2002)

It is important to clearly state the project's objectives, goals and strategies, which provide the standard against which the progress of the project can be evaluated it

also provides the base for project monitoring, evaluation and control. To assess the project results it is crucial to understand the following concepts:

- The aim is to develop measurements of project qualities and results through information arising out of the management of the project work breakdown structure.
- Performance measurements would always rely on the judgment of the managers doing the measurement.
- The use of common measurement factors arises out of the status of project work packages consistent with the organizational decentralization of the project.
- Measurements should be kept to a minimum relevant to each work package in the project work breakdown structure.
- Measurements of work packages must be integrated into measurement of the project as a whole. (Cleland 2002, 378)

Monitoring and evaluation to gather the required information are integral to control and closely connected with the control functions. Monitoring means to make sure sufficient intelligence is gained on the status of the project so that an accurate evaluation of the project can be conducted, also monitoring should address every level of management requiring information about project performance and reflects the work breakdown structure of the project, furthermore monitoring should correspond with the logic of the planning, organizing, directing and motivating systems of the project. (Cleland 2002, 382)

In general understanding project evaluation is a systematic and objective assessment of an ongoing or completed project. It is a step-by-step process of collecting, recording and organizing information about project results, including short-term outputs (immediate results of activities, or project deliverables), and immediate and longer-term project outcomes (changes in behavior, practice or policy resulting from the project).

The aim is to determine the relevance and level of achievement of project objectives, development effectiveness, efficiency, impact and sustainability. (*Glossary of key terms in evaluation and results-based management)*

During the evaluation of a project it is vital to find the answers to the following questions:

- What progress has been made?
- Were the desired outcomes achieved? Why?
- Are there ways that project activities can be refined to achieve better outcomes?
- Do the project results justify the project inputs?

All technical cooperation projects are subject to evaluation. Depending on the project evaluation plan, evaluations can take different forms - self-evaluation, internal, independent and external.

According to International Labour Organization's evaluation unit (1999), there are five types of evaluations that can be performed.

Annual reviews are self-evaluations that are managed and conducted by the project management with the participation of the local partners. They usually serve the annual progress reporting.

Interim evaluations should take place approximately halfway through project implementation. An interim evaluation is most useful when a number of planned activities have been delivered and a considerable percentage of project funds have been spent.

The required independent evaluation, for projects with a budget of US$ 500,000 or more can be either an interim or final evaluation. Most project managers choose independent final evaluations. However, independent interim evaluations can serve to reassure the stakeholders that the project is on track. An external evaluation can replace a required independent evaluation.

Additional evaluations can take place if considered expedient by the project management, the project partners or the evaluation focal person. An evaluation is indicated if the project or line management believes that an extensive readjustment of the project objectives or strategy should take place, for instance, because the project's approach is unfeasible or there has been a fundamental change in the project's environment.

Additional independent evaluations can also be useful. Independent evaluations are more expensive than internal ones, but the investment can be worthwhile if the project benefits from fresh ideas generated by an outside perspective. In particular, innovative or pilot projects can benefit from an outside assessment of the viability of their approaches during implementation and before they are replicated elsewhere. It is recommended that projects of four years' duration or more have both independent interim and independent final evaluations.

2.6 Risk management

The word "risk" is a common and widely used word of our daily vocabulary, relating to personal circumstances (health, pensions, insurance, investments etc), society (terrorism, economic performance, food safety etc.), and business (corporate governance, strategy, business continuity etc.). One area where risk management is inevitable is in the management of projects, perhaps because of the risky nature of projects themselves.

Before describing the risk management process, it is obviously important to understand what it is that needs to be managed. The definition of "risk" clearly includes two distinct types of uncertainty: those that if they occur will have a negative effect on a project objective, and those that would have a positive effect. In other words, risk includes both threat and opportunity. (Dinsmore 2006)

There are five main categories of risks associated with project management: external, cost, schedule, technology and operational risks. External risks concern the unexpected events that can happen outside the control of project manager and, in most cases, the corporation. Most of these risks are very difficult to control by

the project manager, but they should be at least identified. Cost risks, on the other hand are directly or indirectly under the project manager's control, they may include cost overruns by project teams or sub-contractors, expansion and change of the project, poor estimating overrun of budget and schedule. Schedule risks can cause project failure by missing or delaying a market opportunity for a product or service. Another category is technology risk, that can result from a wide variety of circumstances. As a result expectations of project's functionality and performance fail. Finally, operational risks are characterized by an inability to implement change effectively and inability to realize the expected benefits of the project. (Murch 2001, 165)

The management of a company is responsible for the operational control of a company as management of a project accountable for the operational control of a project. The aim in both cases is to achieve the overall targets and goals. It is also true for the risk management. Expediency and costs play the major part in the implementation process. Risk management covers all operational sectors of the company; in practice it is best to centralize the planning and implementation of risk management in hands of a specific person. Risk management should be under control all the time and implemented systematically. The progress is divided by stages, so the essential parts are not overlooked. There are five separate phases: setting targets, mapping risks, evaluating risks, selecting methods and estimating costs and finally, developing risk management system that could the need of a project. (Luotonen 1993, 18-21)

The sub-discipline of Risk Management is a major area of focus; one emerging approach is to use the techniques for controlling negative risks (threats) to capture positive risks (opportunities).

Initially, project practitioners focus on their subject matter expertise, such as financial analysis, telecommunications design, or marketing creativity. People involved in the project process must be also competent in scheduling, status reporting, and risk management. After those skills are mastered it is important to have such competencies such as financial knowledge, facilitation, leadership, problem solving/decision making, and creating /innovation. (Dinsmore 2006)

All projects, to some extent, are characterized by the following:

- Uniqueness
- Complexity
- Change
- Assumptions
- Constraints
- Dependencies
- People.

Each of these factors may cause risk in every project, requiring a structured and proactive approach to the management of risk if the project is to succeed. risk management can be considered a key contributor to the success of both projects and businesses. This arises from the clear link between risk and objectives, embodied in the definition of the word. “Project risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective.” (Dinsmore 2006)

Risk management aims to identify those uncertainties with the potential to harm the project, assess them so they are understood, and develop and implement actions to stop them occurring or minimize their impact on achievement of objectives. It also has the goal of identifying, assessing, and responding to uncertainties that could help achieve objectives. Because it focuses attention on the uncertainties that matter, either negatively or positively, risk management is a Critical Success Factor for project (and business) success. Where risk management is ineffective, a project can only succeed, if the project team is lucky. Effective risk management optimizes the chances of success, even in the face of bad luck. (Dinsmore 2006)

2.6.1 Risk management process

Risk management should be a continuous and developing process which runs throughout the organization’s strategy and the implementation of that strategy. It

should address methodically all the risks surrounding the organization's activities past, present and in particular, future. (Institute of Risk Management 2002)

Risk management does not have to be complicated, it can be clearly structured. The steps in the process follow a natural way of thinking about the uncertain future, by asking and attempting to answer the following questions, concerning planning, identification and analysis:

- What needs to be achieved?
- What uncertainties could affect the project, for better or worse?
- Which are the most important uncertainties to address?

According to Dinsmore (2006) there are several techniques and steps that could help to avoid these uncertainties:

- Qualitative risk analysis — prioritizing risks for subsequent further analysis or action.
- Quantitative risk analysis — numerically analyzing the effect on overall project objectives of identified risks.
- Risk response planning — developing options and actions to enhance opportunities and to reduce threats to project objectives.
- Risk monitoring and control — tracking identified risks, monitoring residual risks, identifying new risks, executing risk response plans, and evaluating effectiveness.

However, the first step of the risk management process is not risk identification. Because risk is defined in terms of objectives, it is necessary first to define those objectives that are at risk. It is important to scale the risk process to meet the risk challenge of each particular project. Projects that are risky or strategically important will require a more complex approach to risk management than those that are more simple or routine. (Dinsmore 2006)

Before starting the risk management process some factors need to be identified first, such as: setting the thresholds of how much risk is acceptable for the project by identifying the risk tolerances of key stakeholders, resolving any differences,

and communicating the conclusions to the project team; and defining terms for qualitative analysis of probability and impact on the project, related to specific project objectives. (Dinsmore 2006)

The most important part of risk management is identifying the risk, sometimes an appropriate response becomes clear as soon as the risk is identified, and in such cases it might be advisable to confront and manage the risk immediately if possible, as long as the proposed response is cost-effective and feasible.

As an example there could be possibility that planned productivity targets might not be met, interest or exchange rates might fluctuate significantly, the chance that client expectations may be misunderstood, or whether a contractor might deliver earlier than planned. These uncertainties should be managed proactively through the risk management process. (Dinsmore 2006)

On most projects, risks do not happen one at a time. Instead they interact in groups, with some risks causing others to be more likely and some risks making others impossible.

Quantitative risk analysis considers risks individually, and allows development of a good understanding of each one. It is however sometimes necessary to analyze the combined effect of risks on project outcomes, particularly in terms of how they might affect overall time and cost. (Dinsmore 2006)

Also, quantitative analysis is most useful when projects are particularly complex or risky, or when quantitative decisions must be made, for example, concerning bid price, contingency, milestones, and delivery dates.

The final phase of risk management is monitoring and control, the purpose of this stage is to make sure that the planned responses to risks are achieving what was expected, and to develop new responses where necessary. During this phase it is determined whether new risks have arisen on the project, and to assess the overall effectiveness of the risk management process. These aims are best achieved through a risk review meeting, though it is possible on smaller projects to review risk as part of a regular project progress meeting. This step also involves

producing risk reports at various levels and for different stakeholders. (Dinsmore 2006)

According to Institute of Risk Management (2002) any monitoring and review process should determine whether:

- the measures adopted resulted in what was intended
- the procedures adopted and information gathered for undertaking the assessment were appropriate
- improved knowledge would have helped to reach better decisions and identify what lessons could be learned for future assessments and management of risks

In conclusion, it is important to note that the benefits of implementing risk management among other techniques result in more successful projects, fewer surprises, less waste, improved team motivation, enhanced professionalism and reputation, increased efficiency and effectiveness, and so on. With these benefits available from adopting such a simple process, risk management deserves its place as one of the most important elements of project management.

2.6.2 SWOT analysis

SWOT analysis is a planning tool that is used to understand the strengths, weaknesses, opportunities and threats usually involved in a project or in a business. It can be used as part of a strategic planning process, it analyses strategic environment. In this thesis the SWOT analysis is used as a tool in risk management, using weaknesses and threats to identify and analyze risks and using strengths and opportunities of to manage risks and problems.

The SWOT analysis provides information that is helpful in matching the firm's resources and capabilities to the competitive environment in which it operates. As such, it is instrumental in strategy formulation and selection. (QuickMBA.com 2007) Figure 5 shows how a SWOT analysis fits into an environmental scan:

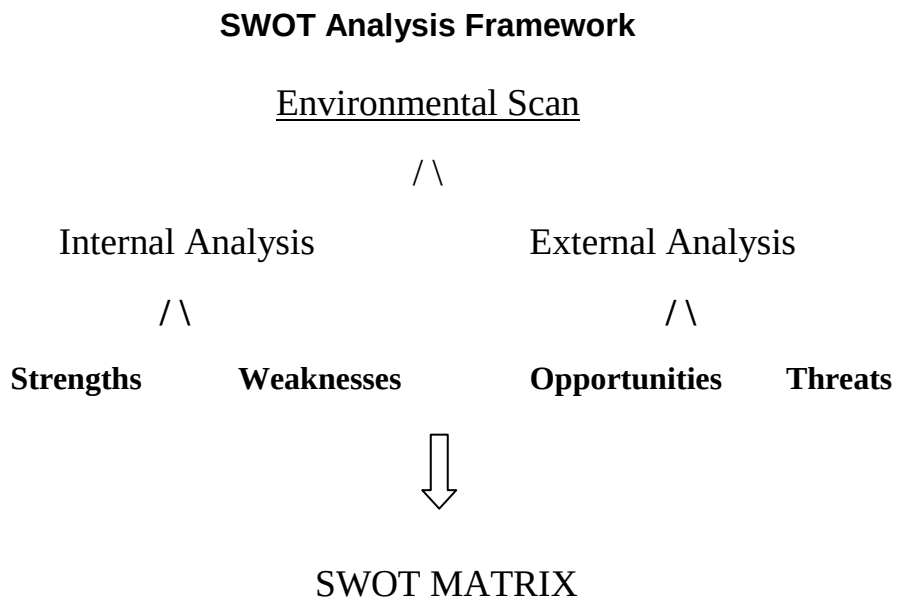

FIGURE 5. SWOT analysis framework (QuickMBA.com 2007)

Strengths, a firm's strengths are its resources and capabilities that can be used as a basis for developing a competitive advantage. Examples of such strengths include: patents, strong brand names, good reputation among customers, cost advantages from proprietary know-how, exclusive access to high grade natural resources, and favorable access to distribution networks. (Bradford 2001)

Weaknesses, the absence of certain strengths may be viewed as a weakness. For example, each of the following may be considered weaknesses: lack of patent protection, a weak brand name, poor reputation among customers, high cost structure, lack of access to the best natural resources, and lack of access to key distribution channels. In some cases, a weakness may be the other side of strength. Take the case in which a firm has a large amount of manufacturing capacity. While this capacity may be considered a strength that competitors do not share, it also may be a considered a weakness if the large investment in manufacturing capacity prevents the firm from reacting quickly to changes in the strategic environment. (Bradford 2001)

Opportunities, the external environmental analysis may reveal certain new opportunities for profit and growth. Some examples of such opportunities include: an unfulfilled customer need, arrival of new technologies, loosening of regulations, and removal of international trade barriers. (Bradford 2001)

Threats, changes in the external environmental also may present threats to the firm. Some examples of such threats include: shifts in consumer tastes away from the firm's products, emergence of substitute products, new regulations, and increased trade barriers. (Bradford 2001)

3. EMPIRICAL CASE STUDY

Previous chapter provided theoretical background for the study, gave the insight into project management. In this section the focus is on research design, method, data collection and analysis. This chapter analyses the case company Evrostroi-S, its project management style and risks and the problems of a particular project of Surgut airport. The analysis is based on the interviews of Evrostoi-S employees and on company's internal data. Furthermore, reliability and validity of the study is discussed and suggestions for further research are presented.

3.1 Research design

According to Malhotra (2004), research design is a framework or blueprint for conducting the marketing research. It sets the outline for collection, measurement and analysis of data. A research design sets the foundation for conducting the project. Research design helps to decide the important elements of the research, such as method of data collection, purpose of the study, time dimension, research environment and participants' views.

More specifically, research design consists of the following components or tasks:

- Define the information needed
- Design the exploratory, descriptive or casual phases of the research
- Specify the measurements and scaling procedures
- Construct and pretest the questionnaire or interviewing form
- Specify the sampling process and sampling size
- Develop a plan of data analysis

(Malhotra 2004, 74)

There are three types of research: exploratory, descriptive and causal. The primary objective of exploratory research is to provide insights into, and an understanding of the problem confronting the researcher. It is used in cases when the problem must be defined more precisely, identify relevant courses of action or gain

additional insights. Exploratory research is often the ability to observe, get information, and construct explanation. The research process is flexible and unstructured. For example, it may consist of personal interviews with industry experts. The primary data are qualitative in nature and analysed accordingly. Typically, such research is followed by further exploratory or conclusive research. But sometimes, exploratory, particularly qualitative research is all the research that is conducted. (Cooper 2006, 138-141; Malhotra 2004, 75)

Descriptive research's main objective is to describe something – usually market characteristics or functions, it is concerned with finding out the answers to the questions who, what where, when or how much. Descriptive research, in contrast to exploratory research, is marked by a clear statement of the problem, specific hypotheses, and detailed information needs. (Cooper 2006, 138-141; Malhotra 2004, 78-79)

Causal research is used to obtain the evidence of cause-and-effect or casual relationships. This type of research is appropriate when it is needed to understand which variables are the cause and which variables are the effect and to determine the nature of the relationship between the causal variables and the effect to be predicted. Similar to descriptive research, causal research requires a planned and structured design.

To choose the appropriate method of research those types can be compared in Table 2.

TABLE 2. A comparison of basic research designs (Malhotra 2004, 76)

	EXPLORATORY	DESCRIPTIVE	CAUSAL
OBJECTIVE:	-Discover ideas and insights	-Describe market characteristics or functions	-Determine the cause and effect relationships
CHARACTERISTICS	-Flexible -Versatile -Often part of the total research design	-Marked by the prior formulation of specific hypotheses -Planned and structured design	-Manipulation of one or more independent variables -Control of other meditating variables
METHODS:	-Expert surveys -Pilot surveys -Secondary data -Qualitative research	-Secondary data -Surveys -Panels -Observational and other data	-Experiments

In this thesis exploratory research will be used, with the purpose of collecting information from the case company Evrostroi-S and getting explanation of project management and risk management in the company. It is important to learn how Evrostroi-S deals with risks in problems during the process of project management.

3.2 Qualitative research method

A qualitative research method is based on the written or spoken words, and does not normally include any numerical measurements. Qualitative research is unstructured, exploratory research methodology, based on small samples that

provide insights and understanding of the problem setting. Qualitative research draws data from the variety of sources, including people, organization, text, setting and environmental objects, events and happenings, whereas quantitative research seek to quantify the data and, typically, applies some form of statistical analysis. However, in marketing research qualitative and quantitative research methods are viewed as complimentary, rather than in competition with each other. (Cooper 2006, 196-199; Malhotra 2004, 137; White 2007)

The qualitative research method was chosen for this study because it fits the objectives of the study to gain an insight into project management and to identify the risks and problems. Also this method fits the small sample group size, because during the project implementation only few people are involved in project management and have the full understanding of the project life cycle. Interview technique was chosen to collect primary data from the case company. The research consists of analysing written or spoken words, not numerical measurements.

3.3 Research process

Research can take many forms, but systematic inquiry is a common thread, it is also used in this study as a blueprint. Systematic inquiry requires careful planning of an orderly investigation. Research, like other forms of scientific inquiry, is a sequence of highly interrelated activities. The stages in the research process overlap continuously, and it is somewhat of an oversimplification to state that every research project has exactly the same ordered sequence of activities. Nevertheless, research often follows a general pattern. The stages are

(1) Defining the problem

(2) Planning a research design

(3) Planning a sample

(4) Collecting data

(5) Analyzing the data

(6) Formulating the conclusion and preparing the report.

These six stages are portrayed as a cyclical, or circular-flow process, because conclusions from research studies usually generate new ideas and problems that need to be further investigation. (ReportBD.com 2008)

3.4 Data collection and analysis

There are two types of data that can be gathered and organized, primary and secondary. Primary data are originated by a researcher for specific purpose of addressing the problem at hand. Obtaining primary data can be expensive and time consuming. Secondary data are data that have already been collected for the purposes other than the problem at hand, therefore their usefulness to the current problem may be limited in several ways, including relevancy and accuracy. The objectives, nature, and methods used to collect the secondary data may be inappropriate for the current situation However, these data can be located quickly and inexpensively. The advantage of primary data is that researcher has control over the data collection process. (Malhotra 2004, 102-103, 138)

This study will use mainly primary data. The research is planned, questionnaires and interviews are designed to fit the needs of research. The aim of data collection is to provide a detailed report and to explain the process of project management. For this case interviews with key managers and project manager are conducted.

Interviews are the most common used techniques used for data collection. Two main types of interviews used in this study are structured and depth interviews. Structured interviews allow having a considerable control over the content of the interview; topics and questions are defined beforehand. Depth interviews are unstructured, direct, personal interviews in which a single respondent is probed by a highly skilled interviewer to uncover underlying motivations, beliefs, attitudes and feelings on a topic. (Malhotra 2004, 147)

During the depth interview a rough outline is followed, specific wording of the questions and the order in which they are asked is influenced by the subject's reply. Probing is done by asking such questions as, "Why do you think that?," "That's interesting, can you tell me more?," or "Would you like to add anything else?"

The chosen interviewees are Deputy Director, Chief Engineer, Main Accountant, Head of Economic-Planning department and main project manager the Director of the company.

First of all, the preliminary interview was conducted with the director of the company, in order to gain insight into the topic and gather information needed for further research. This interview was conducted personally and had an informal structure. The conversation was taped and some notes were made during the discussion, the outline of the research was made, general information about the airport project was received and main problems and risks were identified. Information gather during this firs interview helped to create the outlines for structured interviews, which were carried out later.

Structured interviews were conducted with other managers; the questions were specific and had an aim to identify risks and problems that occurred during the project process. The heads of departments were interviewed so the questions concerned on only main project life-cycle process but also problems that are specific for each department. For example, the head of economic-planning department described the financial aspects and problems of the project.

Most of those interviews were conducted over the phone, but the respondents were cooperative and gave very specific descriptions sometimes. During the phone interviews written notes were maid and additional questions were asked if something was unclear or if the respondent went off topic. The problem was that some answers were too technical; it caused difficulty in analysing the data.

After phone interviews, the discussion with project manager was organized again to clarify some information concerning project life-cycle and to get an understanding of the technical data, provided by some of the managers.

Also, an interview was conducted with one of the partners or a sub-contractor, who was involved in the management process, in order to get an outside perspective on the project.

Finally, the depth interview was conducted with the head of the company. There were structured questions as well as an unstructured conversation. In depth interview was necessary because the head of the company is a main project manager, who could offer ideas and provide additional information for the study. Also after phone interviews, the discussion with project manager was necessary to clarify some information concerning project life-cycle and to get an understanding of the technical data, provided by some of the managers.

Secondary data is also used, when the company is described, articles about the company are used. Some of the company's annual reports were studied and necessary information was retrieved and made into a report of the company.

The main problem during the analysis of secondary data and interviews was that all the information was in Russian and needed translation and interpretation during the analysis and reporting. Therefore, it is rather brief and contains the main conclusions drawn after the analysis of the data.

After the thesis was almost finished more information was needed in order to complete the SWOT analysis, so a brief phone interview was conducted with the project manager, head of the company to clarify internal strengths of the company and external opportunities, which were not part of the main interview's questions.

3.5 Reliability of the study

In spite of the difficulties during the analysis, the data collected had a high level of reliability. The project was ordered by a municipality, so all the reports were accurate and the data and information about the process was disclosed. So the interviewees could be quite open in their responses. The unstructured nature of the research design also helped to gain a deeper insight into the topic. To insure the accuracy of the answer analysis all answers were recorded by the recording device.

The materials used in this study are up-to date and gathered from reliable sources. Also to gain a different perspective and to ensure the validity of the study one of the subcontractors was interviewed.

3.6 Case company Evrostroi-S

Surgut district is a unique region, defined by high rates of economic development, especially in the field of construction. Company Evrostroi-S has over the past 15 years, been developing new objects in the territories of Surgut and has been reconstructing old buildings. During the past 10 Evrostroi-S years has repaired and rebuilt some of the biggest and most important municipal buildings. Among those significant projects are the rebuilding of an old airport terminal, which is used as a case study for this thesis. Also an entertainment complex "Akvilon" and city hospital have been reconstructed by Evrostroi-S. In appendix 3 some of the projects done by Evrostroi-S Company are displayed.

Evrostroi-S rebuilt an old, unprofitable shopping center into a modern network of restaurants “Il Patio” and “Rostics”, franchise enterprises of “Pizza Hut” and “KFC”, which are now very popular among the citizens of Surgut, partly because of its original design. In 2005 Evrostroi-S successfully executed an important municipal order of the Surgut airport – implementing, an innovative system of connected telescopic air gates. The project was anticipated by most of the citizens as it finally allowed frequent international flight connections. During the construction of this object German specialists were present and shared the know-how of the technology. The project was successful, which pleasantly reflected on the reputation of the company.

The air gate system is especially useful in extreme Siberian weather, which made accessing the plane from the main building of the airport easy, even in the coldest seasons. This system is still quite rare in Russia and implemented only in few Russian cities.

Now the company is undertaking even a bigger project. It is conducting the construction of a new city district N.39.

Company Evrostroi-S was established in 1996 as a reconstructing firm, the name means "European-quality repair - Surgut", which was what the company was doing at those times. It was introduction the new technologies of construction and repair works.

The term European-quality repair was widely used in Russia in the 90s. Finnish constructors first introduced this system of building repair in 1995 and Evrostroi-S was one of the firs companies that implemented the new technology in their business. The first “revolutionary” innovative project of the company was the reconstruction of a municipal dental clinic. Some of the managers and workers came from an international Finnish-Russian joint company in Saint-Petersburg, to ensure the successful implementation of a new technology. Most of the workers stayed in Surgut and continued working for Evrostroi-S.

"Evrostroi-S" specializes in turnkey projects. It also executes almost all parts of the project, because in the company there are departments of builders, electricians, sanitary technicians, and even ventilation technicians. Only for the execution of specific works, such as installation of video observation, security-fire alarm system installation, and installation of IT networks, the help of subcontractors is used.

According to Mr. Ganin, the head of the company, the concept "European-quality repair" became outdated — now quality reconstruction is the norm. Construction field is rapidly developing; new innovative technologies are being developed and in order to implement them properly and successfully excellent technicians and workers are needed, and those are the employees of Evrostroi-S.

3.7 Airport project management

Project ”assembly of an airport” by Evrostroi-S is a turnkey project that includes the purchasing of the materials, assembly and installation of equipment, building. The cost of the project was 600 million rubles (14 500 000 euros).

The project was ordered by city municipality and stockholders of "Airport Surgut Ltd.". City municipality council made a decision about airport expansion and need for internationalization.

The project team consisted of general project manager, 8 managers and 70 engineers in addition to construction workers. The team was supervised by the project manager the director of the company.

3.7.1. First stages of project

The need for a new airport building was identified by the city municipality years before Evrostroi-S started this project. The stages of pre-feasibility and feasibility study were inducted by the municipality of Surgut and the financing of the project was included in the city budget.

Problems occurred during the identification of potential contractors, several attempts were made to rebuild the old airport building, but due to many difficulties in planning and implementation they all failed. No follow-up was made by the companies, so the reasons of failure were not identified. Finally, Evrostroi-S was the only company that was able to successfully implement and hand over the project.

Tender system was implemented in Russia only in 2007, therefore in 1999 general contractor, appointed by the city council, inspected potential suppliers of the project. The requirements of reputation on the market, proper documentation and reliable equipment were met by Evrostroi-S.

After the company was chosen as the main contractor, negotiations were held. During the negotiations necessary requirements for the project were discussed, as well as the financing of the project. The project was financed from the municipal budget. Necessary inspections during the working process and after handing over the project were discussed. Contracts were signed.

Contracts and all legal paperwork were conducted according to the Russian standards by Evrostroi-S. All subcontractors and manufacturers were paid in

rubles. Currency was among the main criterias when the choice of subcontractors was made, because of the high rate of currency fluctuation and risks involved in currency exchange and instability of ruble.

3.7.2 Planning and design

The project layout, the blueprints were designed by the Department of Aviation "Sibaeroproject"**,** Krasnoyarsk city. The plan was to reconstruct the old airport building and redo the construction work done by the previous contractors. Reconstruction and rebuilding is much more complicated than building a new project, because all the previous mistakes need to be fixed which involves big amount of risk, especially when planning the finances, as it is very hard to estimate the exact cost of the whole project beforehand. The company had to do all the planning from the very beginning.

While the design was prepared by the sub-contracting company Evrostroi carried out all the managerial planning and time management. The company chose the subcontractors by itself and did all the necessary planning of human resources and implementation of provided financing.

The difficulties in this step of project life cycle concerned the need to re do the work of the previous project teams, consider what had to be changed and what had to be demolished in order to save as much resources as possible, as required by the municipal buyer.

3.7.3 Main stages of implementation

The largest part of the project is actual implementation of the works. In a project like constructing an airport it includes many technical aspects and various risks. So, after the cooperative planning with Sibaeroproject, Evrostroi-S conducted all the main stages of a project life cycle:

1. General construction works

2. Engineering projects (electricity, ventilation, plumbing)

3. Finishing, decorating, furnishing the premises

4. Installation and tuning of all equipment

5. Testing of equipment

5. Handing over the project

The major part of a project - implementation of the works, or building, was carried out in 3 stages:

1. Building of a new departure hall during 1999-2001, the cost of this part was 250 million rubles (6 million euros).

After the first stage the financing from the city municipality was stopped for two years due to city budget deficit. Municipality was not able to determine when the financing will resume or if this type of project could be affordable in a time of city's financial crisis. So for almost two years the project was frozen.

2. Reconstruction of the old airport building. Construction of arrival hall and baggage claim area, the works were carried out during 2003-2005, the costs of this part were 278 million rubles (6.7 million euros).
3. Final stage of the implementation of the project was installation of 2 airport telescopic gates during 2005, it costed 72 million rubles. (1.7 million euros).

As a result, for completing this project Evrostroi-S company's profit from the whole project was 20%, which is 120 million rubles (2.9 million euros). Considering the length of a project, estimated annual profit was 24 million rubles (577 000 euros).

During project implementation stage the help of sub-contractors was used in the areas where Eurostroi-S was not competent or did not have the required resources. One of the sub-contracting firms was "Infospeztroi Ltd", who implemented specialized services, such as installation of fire alarm system and installation of local networks. Local networks included the alarm system, communication, loud-speaking communication, the notification system.

Another sub-contractor was “Airport Surgut Ltd”, the company that carried out special equipment installation, such as video observation.

Most of the equipment used in this project was very high-tech and not available on the Russian market at the time, so in order to deliver quality project, Evrostroi-S imported the required equipment from abroad. Several international suppliers were chosen, the company had worked with most of them before, so the level of trust was high, which made ordering and payment easier for both sides.

International equipment suppliers delivered high quality products; installation process was carried out by highly skilled workers, from the supplier’s side. All suppliers and specialists were fluent in Russian, and familiar with Russian business system. That was also one of the factors in choosing the international suppliers. The materials from three different countries were delivered to Russia in order to complete this project.

Supplier from Serbia, the former Yugoslavia, Belgrad firm “UNION engineering, industrial furnishing” provided wooden equipment such as tables, chairs, cases, and registration desks. Supplier from Germany, Leichlingen firm SRK “baggage handling systems” GMBH exported belt conveyors for luggage handling. another German exporter, Wiesbaden firm HEIMANN provided x-ray equipment for luggage and security detector frames for passengers. Finally the most complex part of the project – telescopic gates were delivered from Spain, constructed by a German firm.

Test running was the final stage of a project before it was handed over to the municipality. The project was monitored and tested by “Airport Surgut”.

3.7.4 Risks and problems

The company’s policy concerning problems and challenges was that the managers and workers could contact the higher staff about occurred difficulty as soon as possible in a form of report. As a result, problems were rapidly dealt with before they accumulated long-term consequences.

The main risk of this particular project concerned the financing of the project. As anticipated the increase in cost happened during the reconstruction of the old airport. During reassembling it was revealed that additional works are needed, the estimate was executed. At this point it was important to coordinate increase in cost of the estimate.

It was necessary to receive additional financing from the city budget, but it was proven to be very difficult, because the estimates of cost have to be done in advance. Problem had to be solved by a committee during negotiations. Also during construction one estimate wasn't confirmed and coordinated, which caused financial loss.

As financing is not always regular; sometimes it was necessary for the company to take out a short-term loan from the bank. This risk was anticipated so the company had prior agreement with the bank that in case of financial problems during the implementation of the project a loan can be taken out.

Another big problem concerned the coordination of replacing the planned equipment. According to the plan one type of materials should have been used, but they got outdated and were not on the market anymore, so it had to be replaced by what was available, which caused the changes in costs and planned construction design.

During the construction works and after the conclusion of the project, several planned and unplanned inspections were conducted by city authorities, some of them are fire inspections and safety inspections. During the project management process serious risks concerning the delivery of materials occurred. The problem was caused by infrastructure problems and delays at the customs, as most of the materials were ordered from the international suppliers.

3.7.5 Factors behind project success

In spite of all the risks and difficulties the project was successful and Evrostroi-S gained good reputation on the market as a very reliable construction company, even in the environment of an unstable financing and irregular or unclear dates of

supplies delivery. The project was highly compatible with the company's strategic vision.

Because of the successful implementation of the project and the fact that Evrostroi-S was the first company which managed to conclude the project cycle, it is important to define the reasons of the company's success.

- Risk Management team was working on anticipation of the risk and solutions for the occurring problems.
- Time management was the key factor. All works and constructions were carried on according to schedule, on time because the risks and problems were dealt with immediately.
- Legal work in cases of big municipal turnkey projects is very important, all the contracts were drawn up and signed as they were needed, but in time.
- Suppliers and needed equipment were identified and included in the project plan.
- Tested and trusted international contacts were used.
- Very important role in project's success played proper high-quality equipment corresponded with engineering specifications, and installed by skilled workers.

Additional factor of success was project manager's idea to purchase and apply more high-tech materials and techniques during the implementation of works. The whole process was significantly improved by it and costs were actually reduced.

3.8 SWOT analysis

In this subchapter the SWOT analysis is used as a tool in risk management of the company Evrostroi-S, strength and weaknesses are internal factors that influence company's success and also the success of the project, opportunities and threats are external factors that affect the company and implementation of the project. Those factors are illustrated in table 3.

TABLE 3. SWOT analysis of Evrostroi-S

STRENGTHS • risk management • time management • strong legal background • experience in the field • experienced project manager	WEAKNESSES • size of the company • small capital • weak human resource management • weak theoretical background
OPPORTUNITIES • stable supply of orders • rapid expansion and development of the city • international contacts • good reputation on the market • lack of competitors	THREATS • irregular financing • infrastructure problems • customs delays • corruption • projects' complexity • municipal buyers

3.8.1 The internal strengths

When analysing the strengths of Evrostroi, the first thing that stands out is risk management of the company, project business is very risky, but Evrostroi was able to anticipate most of the risks and solve the problems during the whole life-cycle of a project. Workers reported the occurring problems to the project manager, who was responsible for the risk management. Project manager was to solve problems and anticipate risks due to his vast experience in managing projects of different complexities. Also project team should be mentioned as it consisted of permanent company's employers who were working together on the previous project and had the know-how and the ability to manage project successfully. Another major factor was time management. All works and constructions had to be carried out according to strict, tight schedule, on time. All

the risks and problems had to be dealt with immediately in order not to disrupt the whole process of the project.

Evrostroi was operating in the field of project management since 1996 and had successfully implemented a series of municipal turnkey projects. So the company has the experience and is well known on the market for its previous operations.

Another valuable strength of the company is strong legal background. When project is ordered by municipality a lot of paperwork has to be done concerning regulations, safety, reliability of the materials and environmental issues. Also the legal team has to deal with international suppliers and international contracts and transactions. Concerning risks, all penalties and specifications related to possible delays and force majeure have to be included in the contracts. Legal department also have to draw up new contracts fast if the need occurs during the project implementation process. So having skilled lawyers employed is essential to the company specialising in project business.

3.8.2 Internal weaknesses

Sometimes it can be hard for the company to face and analyse its own weaknesses, but it is important to have the objective understanding of them, in order to know where the company should improve or if it is impossible where the company could use the help of sub-contractors in order to accomplish the complete project. Evrostroi-S company's main weakness is the relatively small size of a company, only 8 managers and 70 other workers of permanent staff. So during the project planning and implementation the help of sub-contractors is constantly used. Subcontractors depend on the type and the size of project.

The company's capital is also relatively small, but the projects that Evrostroi-S carries out are big and costly affairs. Project of Surgut airport was the biggest project implemented by the company up until now and the cost was over 14 million euros. Evrostroi-S because of its budget takes on only the orders that are fully financed by the buyer from the beginning.

Another weakness that probably affects company the most and results in many unexpected difficulties and delays is weak project management. Some of the staff, mostly from lower positions is very unmotivated and often breaks the terms of the employment contract or miss work entirely, so they get fired and new workers have to be employed. Sometimes seasonal workers are not as skilled as they claim, so the implementation of the works may take longer or additional staff employed, which results either in construction delays or increase in costs.

Human resource management is not well developed and studied in Russia in general and very often salary is used as only one motivational tool. Many human resource managers lack the theoretical background. Also in Evrostroi most of the managers are very experienced in practical aspects of the job but do not have a strong theoretical knowledge. However this factor does not have a major effect on the project due to vast experience of the project team.

3.8.3 External opportunities

Main external opportunity of Evrostroi-S lays in its good reputation on the construction market. The company had successfully implemented many projects ordered by municipality and is responsible for either construction or reconstruction of several Surgut's famous sights. Evrostroi-S is one of the major constructing firms, it has few competitors and only one of the competitors also has well established contacts with the municipality of Surgut. So municipality offers tenders to two companies and then decides which project will suit which company.

Surgut is a big rapidly expanding city that is always in need of new constructions or innovation so there is no lack of municipal projects orders, so Evrostroi-S is constantly working with the municipality and always has a project to do. The company easily gets tenders because of its good reputation, established contacts with municipality authorities, necessary know-how in construction and high-tech materials and equipment it provides.

Evrostroi-S had established international contacts from its very beginning, so it received the necessary knowledge how to implement the works on the European

level. It also has long-established relationships with international supplier, so the materials that are imported are very high quality especially in comparison with domestic materials and equipment.

3.8.4 External threats

However there are external threats to the company and the project that Evrostroi-S cannot influence, such as irregular financing, infrastructure problems, customs delays, corruption, projects' complexity and high demands of municipal buyers.

As it was mentioned earlier, the main risk of this particular project was concerning the financing of the project, financing by the municipality was not always regular. Sometimes it was necessary for the company to take out a short-term loan from the bank.

Infrastructure in Russia is not well developed there is high number of problems concerning quality of the roads and traffic accidents so the risk in transporting the goods inside Russia is high and most of the materials and equipment had to be transported from abroad. This causes another threat during the transportation through different countries' borders, which results in a lot of paper work and unavoidable customs delays.

The main buyer of Evrostroi-S's services is municipality and because most of the buildings constructed are municipal objects the demands and responsibilities are very high. The project implementation process is checked regularly by the city authorities in form of inspections and the end-result of the project is tested many times by the buyer to make sure it answers to all the regulations and that it answers all the objectives set at the beginning of the project.

4. CONCLUSIONS

Project management is one of the biggest approaches to business-to-business opportunities, and it is rapidly expanding. Projects exist to deliver a product or service that hasn't existed before. In this sense, a project is unique. Because of this quality projects have a tendency to be risky and cause unexpected problems.

The aim of this study was to investigate management process of the project and learn about its implementation, also to identify risks and difficulties that can be faced during the life-cycle of the project. To achieve these goals literature research was conducted and a case of a Russian project-oriented company studied.

In the beginning of the study some questions were stated, that this work was supposed help to find answers for. Different types of projects were identified with a different degree of difficulty, subcontracting project was the easiest to implement and had the lowest risk factor, while turnkey "plus" project was the most complex and difficult project to carry out, and accordingly it had the highest uncertainty level.

This study concentrated on the turnkey project, a large-scale project where main contractor is responsible for marketing, negotiation and setting up of the project. The project, when handed over to the buyer, is complete in every respect – equipment, services and even infrastructure involved. This feature of finished turnkey project distinguishes it from all other types of projects. The case study shows how the turnkey project was carried out, the project manager – the director of the company was responsible for most of the aspects of a project. Evrostroi carried out all the managerial planning and time management. The company chose the subcontractors by itself and did all the necessary planning of human resources and implementation of the works using provided by municipality financing. However the design was prepared by the sub-contracting company, as well as some minor works during the construction of a building.

The management of a turnkey project is very integrated, it is a continuous process, usually a project has objectives, such as schedule, cost, and technical performance

so project management works on attaining them. The logical sequence of the activities to accomplish those goals is defined as project life-cycle, with the main steps of initiation, planning, execution, and closure. Every step is a complex process in itself and it is connected with risks. Those risks have to be managed, because they affect the achievement of the project goals, risk management has the goal of identifying, assessing, and responding to uncertainties; develop and implement actions to stop them occurring or minimize their impact on achievement of project objectives. Risk management affects in a strong way whether the company succeeds or fails in a project.

The main risk of this particular project was concerning the financing of the project. It was necessary to receive additional financing from a city budget; problem had to be solved by a committee during negotiations. Also loans from the bank had to be taken out for duration of a project. Other, more technical problems occurred with coordination of the works, unplanned inspections by the authorities and delivery delays.

The project of airport by Evrostroi-S was successful in the end. Factors like proper time management, risk assessment and high-quality internationally imported equipment with high-tech installation techniques plaid the major role in successful project handing-over to the city municipality.

The research actually explains what it takes to have a successful project, with real examples and problem solutions, so it can have a practical value. In general, companies that are starting new projects, especially the turnkey projects, could use this research as a guide to successful project implementation.

Moreover, the study would be very useful to Russian companies that are trying to get tenders and in future may try to implement very similar projects. There is a demand for the new or improved airports in several Siberian cities, such as Kogalym, Nizhnevartovsk, Krasnoyarsk, Khanti-Mansiysk. Also, in Russia project management as a business subjects only starts to gain popularity among the managers and firm directors. Usually when dealing with the project the techniques of operational managements are used.

The research on project management and turnkey project can be carried out further, the scope of information will be bigger and the results more interesting if a variety of turnkey project were compared with each other, in order to identify what similar factors have been experienced across projects. It will also help to better understand what qualities are unique for the turnkey projects.

REFERENCES

AIRMIC & ALARM 2002. A Risk Management Standard. IRM Institute of Risk Management.

Bradford, Robert W. & Duncan, Peter J. 2001. Simplified Strategic Planning: a no-nonsense guide for busy people who want results fast. Chandler House

Business Glossary 2006. Barron's Educational Series, Inc [online]. [referenced 12.03.2010]. Available in www-form: <URL:http://www.allbusiness.com/glossaries/turnkey-project/4942539-1.html>

Cleland, David 2002. Project Management: strategic design and implementation. The McGraw-Hill Companies, Inc.

Cooper, Donald R. & Schindler Pamel S. 2006. Business Research Methods. Mc Graw Hill. US

Cova, Bernard 2002. Project Marketing: beyond competitive bidding. John Wiley & Sons Ltd.

De Vilder, Dirk 2008. Project Management T-kit. Council of Europe and European Commission.

Dinsmore Paul C. & Cabanis-Brewin Jeannette 2006. The AMA handbook of project management. New York. AMACOM

Frame, J. Davidson 1995. Managing Projects in Organizations. New York. Wiley.

Harvard Business Review 2005. Harvard business review on managing projects. The Harvard business review paperback series

International Labour Organization. 1999. ILO Technical Cooperation Manual

Luostarinen, R. & Welch, L. 1997. International Business Operations. Helsinki: Helsinki School of Economics.

Luotonen, Eero 1993. Risk Management and Insurances. Basic concepts

Malhotra, K. Naresh 2004. Marketing Research: an applied orientation. Pearson Education.

Murch, Richard 2001. Project management. Best practices for IT professionals. Helsinki. Painatuskeskus Oy.

OECD/DAC 2002. Glossary of Key Terms in Evaluation and Results-Based Management.

Oliver, Paul 2000. Research for Business Marketing and Education.

QuickMBA.com (2007). SWOT analysis [online]. [referenced 22.02.2010] available in www-form: < http://www.quickmba.com/strategy/swot/>

ReportBD.com (2008). Types of Research [online]. [referenced 20.02.2010] available in www-form: <URL:http://www.reportbd.com/articles/116/1/Types-of-research-Research-Process-amp-The-IslandParts-of-Research/Page1.html>

Reuvid. 2005 Managing Business Risk: a practical guide to protecting your business. London. Kogan Page.

Westland, Jason 2006. Project Management Life Cycle. London. Kogan Page.

White, Brian 2007. Dissertation Skills: for business and management students. Thomson Learning.

Young, Trevor L. 2003. The handbook of project management: a practical guide to effective policies and procedures. London. Kogan Page.

APPENDIX 1

Interview outlines:

- What are the components, stages of the project?
- What were the costs and profits of the project?
- How long the project took?
- Was the help of subcontractors used, which works were done by the subcontractors?
- Who were the suppliers, were there any difficulties with the supply process?
- What are anticipated and actual risks, e.g. in financing, in logistics, concerning equipment and paperwork; intercultural difficulties?
- How the problems were solved?
- Why the project was successful, what could have been done to improve it?

APPENDIX 2

Interviews:

Ganin Vladimir Georgievich, Director of Evrostroi-S, personal preliminary and main in depth interview during summer and autumn 2009, follow-up questions by telephone December-January 2010.

Ganin Vitalii Vladimirovich, Deputy Director, personal interview September 2009

Head of Economic-Planning department , telephone interview November 2009

Chief Engineer, telephone interview November 2009

Main Accountant, telephone interview November 2009

One of the subcontractors, telephone interview November 2009

APPENDIX 3

Projects completed by Evrostroi-S

Surgut airport

Telescopic gate