



**VILNIUS UNIVERSITY**  
BUSINESS SCHOOL

**International project management programme**

***MASTER'S THESIS***

PROJEKTŲ VADOVŲ PERSPEKTYVIŲJŲ KOMPETENCIJŲ ĮTAKA PROJEKTŲ SĖKMEI STATYBŲ ĮMONĖSE	INFLUENCE OF PROJECT MANAGER'S PERSPECTIVE COMPETENCIES ON PROJECT SUCCESS IN CONSTRUCTION COMPANIES
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## ABSTRACT

VILNIUS UNIVERSITY  
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### INFLUENCE OF PROJECT MANAGER'S PERSPECTIVE COMPETENCIES ON PROJECT SUCCESS IN CONSTRUCTION COMPANIES

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**Problem of the thesis:** The changing environment of an organization and the transformation of companies into project organizations pose new challenges to which a modern organization must adapt in the competitive market. Therefore, there is a need for competent, leading project managers who would successfully implement and achieve the company's goals. The previously identified success factors of project managers and their barrier aspects form the essence of this master's thesis problem, which can be defined by the following questions: 1) What are the success and failure factors of organizations' project management? 2) What competencies are present and what competencies are missing for the project managers in the organization? 3) How do project managers' competencies influence the project's success?

**Purpose of the thesis:** There is no doubt that a competent project manager takes on a strategically important role in the organization. Project manager competencies and effective collaboration with his team members are essential at all stages of project management. This paper emphasizes project managers' managerial and emotional intelligence competencies, which will be significant for future leaders. It is also imperative to highlight the project manager's ability to focus and guide the team towards unleashing its potential. Project management is a new but rapidly growing specialization as human resource management. Probably every organization that has a project manager position has one or another well-established model of project manager competency

management. This paper will focus on construction projects in Lithuania as an area for research and explore the relation between perspective competencies of project managers and it's relation to project success. The aim of the thesis – to find out the relation between project managers' competencies and project success in the organization.

The objectives:

1. To analyze the theoretical project manager competencies features and models.
2. To describe the project management success and project manager competencies influence.

**Research methods:** A qualitative case study was conducted in construction companies based in Lithuania. The empirical data was collected using open ended survey with project managers. In total 9 responses were gathered. The survey aimed to identify critical factors for project success and project management success, challenges when managing construction projects and main characteristics of project manager that helps to manage projects. Additional emphasis was put on perspective competencies presented in IPMA Individual Competence Baseline, ver. 4.

**Conclusions:** Gathered results presented the perspective of project managers in construction companies and the challenges that comes with this role. Main characteristics of project managers that leads to project success were identified while doing literature analysis and were confirmed with the empirical research.

**Key words:** Perspective competencies, project success, project management success, construction projects.

# SANTRAUKA

VILNIAUS UNIVERSITETAS  
VERSLO MOKYKLA  
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PROJEKTŲ VADOVŲ PERSPEKTYVIŲJŲ KOMPETENCIJŲ ĮTAKA PROJEKTŲ SĖKMEI  
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**Darbo problema:** Kintanti organizacijos aplinka ir įmonių virtimas projektinėmis organizacijomis kelia naujus iššūkius, prie kurių konkurencinėje rinkoje turi prisitaikyti moderni organizacija. Todėl reikalingi kompetentingi, vadovaujantys projektų vadovai, kurie sėkmingai įgyvendintų ir pasiektų įmonės tikslus. Anksčiau nustatyti projektų vadovų sėkmės veiksniai ir jų barjeriniai aspektai sudaro šios magistro baigiamojo darbo problemos esmę, kurią galima apibrėžti šiais klausimais: 1) Kokie yra organizacijų projektų valdymo sėkmės ir nesėkmės veiksniai? 2) Kokių kompetencijų yra ir kokių trūksta projektų vadovams organizacijoje? 3) Kaip projektų vadovų kompetencijos turi įtakos projekto sėkmei?

**Baigiamojo darbo tikslas:** Neabejotina, kad kompetentingas projektų vadovas organizacijoje atlieka strategiškai svarbų vaidmenį. Projektų vadovo kompetencijos ir efektyvus bendradarbiavimas su jo komandos nariais yra būtini visuose projekto valdymo etapuose. Šiame darbe akcentuojamos projektų vadovų vadybinės ir emocinio intelekto kompetencijos, kurios bus reikšmingos būsimiems lyderiams. Taip pat būtina pabrėžti projekto vadovo gebėjimą sutelkti dėmesį ir nukreipti komandą į savo potencialo išlaisvinimą. Projektų valdymas yra nauja, bet sparčiai auganti žmogiškųjų išteklių valdymo specializacija. Turbūt kiekviena organizacija, turinti projektų vadovo pareigas, turi vienokį ar kitokį nusistovėjusį projektų vadovo kompetencijų valdymo modelį. Šiame darbe daugiausia dėmesio bus skiriama statybų projektams Lietuvoje,

kaip tyrimų sričiai, ir nagrinėjamas ryšys tarp perspektyvinių projektų vadovų kompetencijų ir jo santykio su projektų sėkme. aigiamojo darbo tikslas – išsiaiškinti ryšį tarp projektų vadovų kompetencijų ir projektų sėkmės organizacijoje.

Uždaviniai:

1. Išanalizuoti teorinių projektų vadovo kompetencijų ypatumus ir modelius.
2. Apibūdinti projektų valdymo sėkmės ir projektų vadovo kompetencijų įtaką.

**Tyrimo metodai:** Atlikta kokybinė analizė Lietuvoje įsikūrusiose statybos įmonėse. Empiriniai duomenys buvo surinkti naudojant atvirą apklausą su projektų vadovais. Iš viso buvo surinkti 9 atsakymai. Apklausa buvo siekiama nustatyti esminius projekto sėkmės ir projektų valdymo sėkmės veiksnius, iššūkius valdant statybos projektus ir pagrindines projektų vadovo, padedančio valdyti projektus, savybes. Papildomas dėmesys buvo skiriamas perspektyvinėms kompetencijoms, pateiktoms IPMA Individual Competence Baseline, ver. 4

**Tyrimo rezultatai:** Surinkti rezultatai atskleidė projektų vadovų statybos įmonėse perspektyvą ir iššūkius, kylančius su šiuo vaidmeniu. Pagrindinės projektų vadovų savybės, lemiančios projekto sėkmę, buvo nustatytos atliekant literatūros analizę ir patvirtintos empiriniu tyrimu.

**Raktiniai žodžiai:** Perspektyvios kompetencijos, projektų sėkmė, projektų valdymo sėkmė, statybos projektai.

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# 1 INTRODUCTION

## 1.1 The relevance and novelty

There is no doubt that a competent project manager takes on a strategically important role in the organization. Project manager competencies and effective collaboration with his team members are essential at all stages of project management. This paper emphasizes project managers' managerial and emotional intelligence competencies, which will be significant for future leaders. It is also imperative to highlight the project manager's ability to focus and guide the team towards unleashing its potential. Project management is a new but rapidly growing specialization as human resource management. Probably every organization that has a project manager position has one or another well-established model of project manager competency management. Still, it is usually not a separate model dedicated only to project manager competency management. Also, many organizations follow a conventional, organically formed competency management model that is often undocumented. Also, the question arises as to whether the formal or informal project manager competency management model in those organizations is consistent with theoretical competency management models. Given these trends, it can be assumed that many organizations are likely to have a universal, all-employee competency management model that is not continuously assessed and improved and has methodological shortcomings. Therefore, this work aims to analyze the literature related to project manager competency management and determine how the project manager's competencies could influence overall success.

The project activity of the organization today is a methodology of innovation and investment activity recognized in all developed countries. In implementing such projects, there is a need for specialists of a new profile, the so-called project managers. The actions of a project manager are extensive. If we compare a project manager with a functional one, they differ in the number of tasks to be solved. As a rule, an active manager is mainly engaged in personnel management when a project manager performs more extensive functions, which include: financial management, personnel management, operational (production) management, procurement and supply, technical and technological aspects of control, and more. That is why it is not enough for a project manager to have work skills and knowledge of best practices, tools, and methodology for project management. Today, project managers need to constantly improve themselves, improve their leadership skills, be flexible, and focus on their values to succeed and get a job. For development, project managers need to continually increase their knowledge, develop skills, and gain new

experience to improve their professional and personal competencies. However, it is not always clear how project managers build their competencies.

## **1.2 The problem and aim of the thesis.**

The changing environment of an organization and the transformation of companies into project organizations pose new challenges to which a modern organization must adapt in the competitive market. Therefore, there is a need for competent, leading project managers who would successfully implement and achieve the company's goals. The previously identified success factors of project managers and their barrier aspects form the essence of this master's thesis problem, which can be defined by the following questions: 1) What are the success and failure factors of organizations' project management? 2) What competencies are present and what competencies are missing for the project managers in the organization? 3) How do project managers' competencies influence the project's success?

The aim of the thesis – to find out the relation between project managers' competencies and project success in the organization.

The objectives:

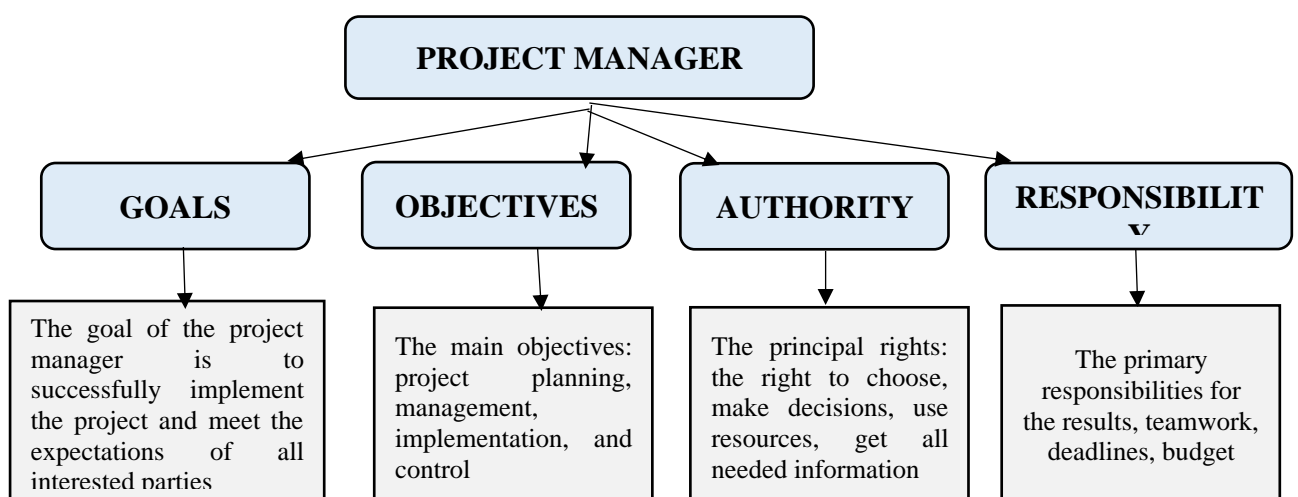
3. To analyze the theoretical project manager competencies features and models.
4. To describe the project management success and project manager competencies influence.

## 2 PROJECT MANAGER COMPETENCIES AND PROJECT SUCCESS RELATION

### 2.1 Project manager role in the organization

There are many responsibilities for project managers. Project managers must also have many skills and have many responsibilities both before and during project implementation leading to project management success. So, before project implementation begins, the project manager is responsible for scheduling a project plan and budget. During the project's performance, his roles include overseeing and managing the project management team and bringing the project to completion. This is because only the project manager knows the full range of project work needed to plan the success of project management. In addition, the project manager is responsible for time management, cost, quality, integration, project team members, communication, risk, and assets. Therefore, the project manager is the person most responsible for the success of the project management. Project managers need to be qualified to motivate and lead team members to success (Gasemagha, Kowang, 2021).

To achieve the organization's goals and project as efficiently and effectively as possible, each project must have a manager responsible for the management of the whole project. The project managers are perhaps the most critical people in project development, management, and the entire process. Project managers are responsible for project planning, team building, and coordination. Four main criteria can define the role of the project manager in the project management process: goals, objectives, authority, and responsibility (see picture 1).



Picture 1 Project manager role in the organization

Source: Bolzan de Rezende L., Blackwell P., 2019.

B. Balint (2016) analyzes the project manager role in the organization is considering the main functions of the project manager in the organization. According to the author good project manager should be able to perform the following functions:

- Planning is the expected process, analysis of problems, assessment, and possible impact and actions to achieve the objectives.
- Organization - the interrelationships between people, human and material resources that influence the implementation of project goals.
- Personnel is the team's choice, determining the remuneration system for the work performed, financial bonuses accordingly.
- Motivation is the encouragement of project team members, the inspiration to pursue interpersonal and common project implementation goals.
- Leadership - in other words, the role of the leader, encouraging example to follow, creating a sense and spirit of the project team.
- Controls are the continuing responsibility of the project manager for deviating from the plan and correcting them for correction.

In summary, project management is the application of knowledge, skills, resources, and methods to carry out project activities and achieve the intended project objectives. Over the last decade, the concept of project management has undergone severe changes - now, it includes subject knowledge and the necessary character traits, behavioral characteristics, and competencies. The project's success depends on the project manager's ability to manage the project, his competencies and skills, and selecting the right team members.

## **2.2 Project manager competencies concept and structure**

As V. Obradovic, A. Montenegro (2018) explain, a good project manager has the required competencies and some defined skills. The authors outline the primary skills required for a project manager: team building and leadership, technical skills, client-related skills, time and risk management, conflict resolution, and business knowledge.

Competence is defined as the ability or capability that the intent appears as a set of behavior. It is possible to predict the effectiveness of the situation by understanding what behavior and intention are relevant. It is used as a critical indicator of performance in a business environment or organization. Thus, the competence theory is the foundation for improving the organization's

performance. The abilities or capabilities of human resources in an organization are described as value, vision, knowledge, career, role responsibility, and task needed to perform (Oh, Chio, 2020).

The concept of competence is defined very differently in different sources of scientific literature: some authors describe competence as "the ability to perform a particular activity based on an individual's knowledge, ability, skills, attitudes, experience, personal qualities, and values; others as skills, abilities, knowledge, and characteristics related to people's activities in communication and achieving the desired result, performing tasks in certain circumstances (Browne, Dreitlein, Mere, 2016). Scientific literature significantly contributes to understanding the concept of competence, and there is a wide-ranging discussion: different concepts of competence are presented. Table 1 shows the concepts of competence of other authors.

*Table 1 The concept of competence*

<b>Author</b>	<b>Definition</b>
<b>C. Araujo, C. Pedron, 2015</b>	Competence describes a wide range of abilities related to an individual's experience. Competence is often used as an attribute of knowledge or ability to describe the ability of employees to perform tasks very well or the ability of an organization to provide the highest quality services.
<b>A. Favek, M. Omar, 2016</b>	Competence is knowledge, skills, attitudes, but there is also a broader understanding - assessments, values, abilities.
<b>W. Browne, S. Dreitlein, 2016</b>	Competence is a functional ability of a person to perform a specific part of professional activity (operation or task) in an actual or simulated activity situation, based on a system of relevant knowledge, skills, and attitudes.
<b>R. Moura, T. Carneiro, 2018</b>	Competence - characteristics/qualities of an individual that is causally related to efficient or better performance of work
<b>H. Abou – Hafs, F. Boutora, 2019</b>	Competence is a multidimensional ability to perform a particular operation or task in an actual or simulated activity situation; it is determined by knowledge, skills, personal qualities, and experience.

Source: formed by author

Summarizing the provided definitions, it can be stated that competence refers to having the ability or skill to do something that includes a person's key characteristics such as motives, traits, abilities, aspects of an image or social role, knowledge that a person can use. The provided definitions could also describe the project manager competence concept. However, more important is to analyze and find out the principal elements and structure of project manager competencies. Various authors have different approaches to the main aspects of project manager competencies and their characteristics. Competence is the knowledge, attitudes, skills, and experience required to perform a specific function successfully. The skills are grouped to help project managers assess and improve their skills and evaluate candidates. These groups are almost independent dimensions of capabilities, describing the whole project management function and project manager competencies.

The summary of various approaches to main project manager competencies' structure is detailed in Table 2.

*Table 2. The project manager competencies' elements*

<b>Author</b>	<b>Elements</b>
<b>T. Galvin, M. Gibbs, 2014</b>	Technical, behavioral, context competencies
<b>V. Obradovic, A. Montenegro, 2018</b>	Emotional intelligence competencies Social intelligence competencies Cognitive intelligence competencies
<b>N. Gruden, A. Stare, 2018</b>	Management competencies Personal effectiveness competencies Cognitive competencies Behavioral competencies
<b>M. Radujkovic, M. Sjekavica, 2017</b> <b>H. Abou – Hafs, F. Boutora, 2019</b>	Knowledge competency Skill competency Attitude competency

Source: formed by author

Various authors divide project manager competencies into different groups, but most outline the areas of knowledge, skills, and attitude. According to M. Radujkovic, M. Sjekavica (2017), project

manager skills are often classified as technical or soft skills. Technical skills are the skills and knowledge required to perform specific tasks to understand and apply the various tools and methods associated with projects in general. They are practical and often involve mechanical, information technology, mathematical or scientific tasks.

Attitude is defined as a capacity that exists in a person that leads to behaviors that meet the job demands within parameters of the organizational environment, which, in turn, brings about desired results. Attitude Competency is a capacity that exists in a person that leads to behaviors that meet the job demands, which brings in desired results beyond knowledge and skill. It is the total of a person's disposition towards the job seen in his behaviors of job involvement, organizational commitment, and overall satisfaction to meet the job requirements and the ability to bring in desired result (Abou – Hafs, Boutora, 2019).

Other authors examine the competencies of a project manager and propose their subsequent division into levels to identify the most critical skills needed by a project manager to anticipate, plan, and manage changes, minimize negative consequences and contribute to the growth of positive results of the organization.

Competencies can be divided into two types: hard skills - functional competencies, which refer to skills acquired in the process of training professional activities, knowledge, and abilities belonging to the section of qualification characteristics, and soft skills - personal characteristics manager, that is, social, cognitive and ethical competences, also acquired in the process of interaction with coaches, teaching staff and the immediate environment, representing a combination of value attitudes, stable human qualities and cognitive activity of the manager. The project manager is one of the critical links and is responsible for completing the project on time. Often, this is the team leader (project group) who provides operational guidance, assistance, and implementation of the work carried out within the framework of the project (Radujkovic, Sjekavica, 2017).

A successfully implemented project is the result of the activities of the project team, the head of which can be the author of the project idea, i.e., its initiator. As practice shows, the implementation of a project largely depends on the competencies of its leader, whose tasks include planning, preparation, performance, and implementation of the project (Table 3).



Table 3. Project manager competencies ' classification

<b>Competency</b>	<b>The content</b>
<b>Leadership</b>	<p>initiative.</p> <p>Chooses a direction and determines a strategy for achieving future results.</p> <p>Can track unforeseen situations and develop a plan to respond to changes on time.</p> <p>Knows how to thank team members for their assistance in the implementation work, encourage initiative, success and support the team spirit, unite the team, and inspire each member to develop and implement the project.</p>
<b>Communication</b>	<p>owns the technique of negotiation.</p> <p>Knows how to justify the goals and objectives of the project.</p> <p>knows how to convey information so that it is understood and interpreted correctly</p>
<b>Organizational</b>	<p>develop the goals and objectives of the project.</p> <p>Plans the project, its scale, timing, changes.</p> <p>Creates a project team, distributes roles within the framework of the design work.</p> <p>Manages financial resources (if any).</p> <p>Monitors the results of the implementation and implementation of the project.</p> <p>draws up a description of the project</p>

Source: Oh. Choi, 2020

To summarize, competencies are knowledge, abilities, skills, and professionally important personality traits necessary for solving professional problems. Their implementation occurs through behavioral indicators in self-organized actions, which are required not only in traditional situations but also in unexpected difficult conditions, and develop when solving new problems. Competencies are universal and reproducible, which means they can be created and formed.

### 2.3 Project manager competencies' models

Competency management is an integral part of human resource management. Therefore, it is worth starting with understanding human resource management to understand competency management processes. One approach to human resource management strategy is as follows: the definitions of human resource management can be divided into "soft" and "hard." Soft approaches to human resource management enhance employee loyalty, quality, and flexibility. "Solid" approaches to human resource management strategy, where human resources are allocated the same way as other resources to achieve business goals. Complex approaches may have elements of soft practice, and mild may include complex outcomes, such as compliance with business strategy. It is worth noting that no theory or principles apply one hundred percent, so it is likely that mixed approaches prevail in modern organizations. For some organizations, a 'hard' approach is more important; for others, a 'soft' approach, but in any case, there is a bit of a mix of approaches. According to this classification, the authors also present human resource models. There is all the power of them. However, all the latest models evolved from the original classical models, so the classical models are discussed in this work. One of the oldest well-known 'Compliance (Michigan) models' emphasizes the close link between human resources strategy and business strategy, which is closely linked to challenging interpretation of human resource management (Oh, Choi, 2020).

The criteria for the success of modern project management are not only the effectiveness of the project in terms of duration and budget goals or investment results, but also the ability to meet user needs, keep the project team motivation and prepare for technological, social, and creative innovations. Therefore, the project manager's business, social and personal skills need to be complemented by a universal facilitator, organization, and business strategy through projects. Various authors have analyzed different project manager competencies' models described in this chapter.

*Table 4. Project manager competencies' models*

<b>Author</b>	<b>Competency elements</b>	<b>Description</b>
Zack, 1999	Declarative knowledge, procedural knowledge, casual knowledge	Knowledge about something is called declarative knowledge. A shared, explicit understanding of concepts, categories, and descriptors.  Knowledge of how something occurs or is performed is called procedural knowledge.

		Knowledge of why something occurs is called causal knowledge.
Quinn, 1996	Cognitive knowledge, advanced skills, systems understanding, self-motivated creativity	Quinn et al. (1996) introduced the model of professional intellect, distinguishing four levels of professional competence: cognitive knowledge (know what), advanced skills (learn how), systems understanding (know-why), and self-motivated creativity (care-why).
Gorog, 2013	Knowledge, skill, attitude	Familiarity with project management tools and techniques Ability to use project management tools and techniques. Approach to projects and project management.
Crawford, 2005	Input competencies, personal competencies	Crawford's model includes both the attribute-based and the demonstrable performance approach. Crawford's model mentions ability instead of attitude
Bloom's taxonomy	Cognitive, psychomotor, affective	Knowledge and the development of intellectual skills Physical movement, coordination, and use of the motor – skill areas Appreciation, motivation, and attitudes

Source: formed according to V. Horvath, 2019

The provided models show the primary project manager competence elements and structure, also describe the main features. One of the most influential and generic competency typologies, known in the literature as Bloom's taxonomy, was developed by Bloom (1964). In the model, competency is divided into three domains: the cognitive, the affective, and the psychomotor domain. The final one was added to the model later. The model became very famous for training and certifications and in different fields of education. The cognitive domain refers to mental skills and is often called the "knowledge level of the model." The affective domain includes feelings and emotions and is

often called the "attitude level." The psychomotor focuses on manual or physical skills, often referred to as skills (Horvath, 2019).

Each competency model usually emphasizes critical competencies and their structure and describes the abilities and skills that managers and project managers need. In particular, to assess competence, the work done by the project manager needs to be evaluated. An important aspect is to answer what a project manager must do to be considered competent. M. Radujkovic, M. Sjekavica (2017) propose a competency model that defines which individuals are considered competent:

1. Who pays enough attention to the performance of their work that is important and valid in the organization (e.g., the person is competent because they are attentive enough to work that is important to the organization). This component describes whether a person performs essential activities, called contribution areas.

2. Who performs work in a manner acceptable to the organization (e.g., competent for excellent personnel management). What an organization evaluates arises from having and applying a set of personal behaviors assessed within the organization. This is closest to what other researchers describe as competencies.

After analyzing the concept of competence, it is expedient to examine the models of the structure of competencies, which are usually focused on the description of the structure of competencies.

V. Horvath (2019) emphasizes the following models of competence structure:

- The corporate competency model is widespread in the business sector and consists of corporate, managerial, and functional competencies. The first concerns corporate requirements for all co-workers; identifies the career growth potential of each associate in a particular organization; the personal attitudes and motivations of each employee. Management competencies determine the employee's readiness to perform managerial functions; describe a successful manager's organizational skills and abilities. Functional competencies describe a co-worker's readiness to work effectively in a particular role; they describe the skills and skills needed to work effectively when a specific function is performed.
- The general and special competencies model is a standard competency model that includes the public (personal and leadership) and specific competencies required for each employee (unique knowledge and special skills competencies).
- The model of leadership competencies is focused on distinguishing the directions of the manager's behavior, identifying competencies that may be important in the direct and

indirect behaviors of the manager. In this model, six blocks of leadership competencies are distinguished: direct leadership behavior is aimed at ensuring operational efficiency; indirect management behavior in implementing and maintaining performance assurance systems; natural leadership behavior in initiating and implementing change; indirect management behavior in implementing and sustaining change management systems in the organization; direct managerial behavior in human resource management; indirect management behavior in implementing and maintaining human resource management systems.

- The concept of competencies and limitations of abilities links the structure of competencies with essential skills (personal, social, and professional). Unique analysis and self-analysis methodologies have been developed to determine competencies. Each type of competence consists of the essential skills and attributes on which the successful development of these competencies depends. Personal competence, or self-management skills, presupposes having clear individual goals and values, managing oneself, and developing one's personality continually. Social competence includes the skills needed to influence people (leading, teaching, educating others, and forming and improving group work). The area of professional competencies, or skills that determine professionalism, includes the ability to solve professional problems, creativity, and the ability to innovate, and modern knowledge, as well as management knowledge.
- Competence and leadership development model. The advantage of this model is that it combines essential components of competence assessment and development, such as the organization's goals, the qualities of the leader or leader (their qualitative aspects), and the competencies that initiate the appropriate actions to ensure the result.

It can be argued that in the first case, the project manager is considered competent according to the functions he performs, and in the second case, how well and in what ways this is done. It must be emphasized that the organizations themselves must create favorable conditions for the development of the competencies of the project manager and his team because organizational factors help to create better motivation is a transparent value system, informing employees about goals, results, successes and failures, participation in decision - making, performance and effort, and remuneration commensurate with qualifications.

In summary, competence refers to having the ability or skill to do something that includes a person's key characteristics such as motives, traits, abilities, aspects of an image or social role,

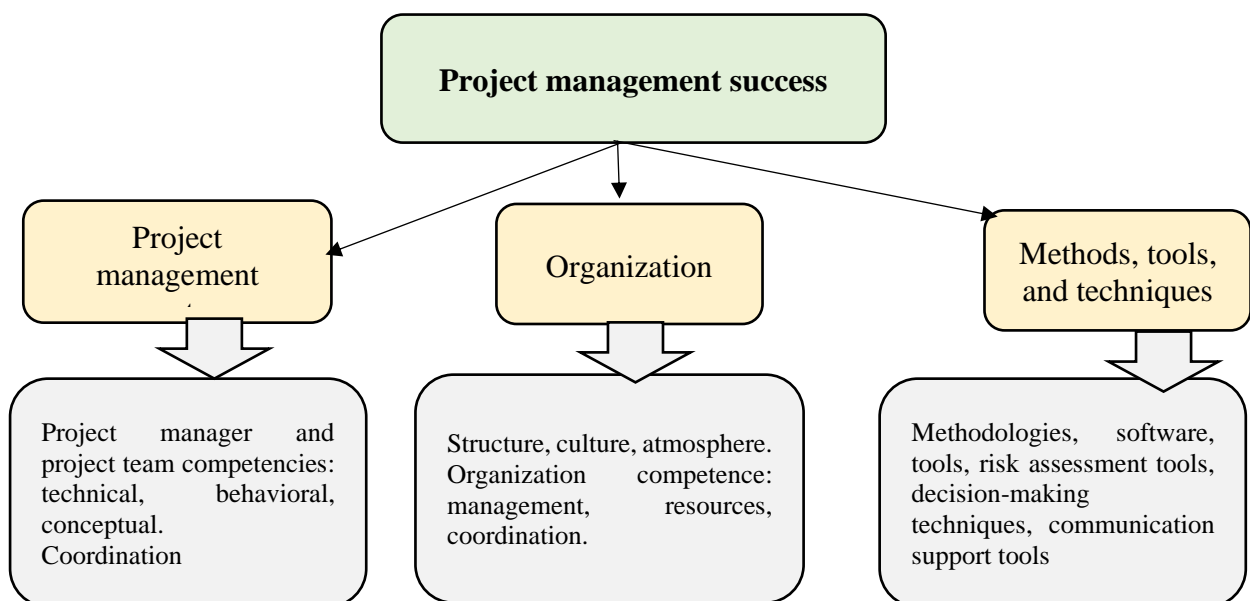
knowledge that a person can use. Not every model is perfect and comprehensive, so several researchers seek to integrate them into an apparent whole, building on existing models.

## 2.4 Project management success factors: project manager competencies influence

Project management today is a recognized area of professional activity. Project management methodology and tools are widely used in project-oriented activities, especially when creating new products and services, with targeted changes within individual organizations and companies. Project implementation is an integral part of business processes present in any organization.

The review of research and the problems of project managers identified in them revealed that the success of projects usually depends not only on the competencies of project managers, their personal qualities but also on other significant factors such as project team, project management, and organization skills. The available knowledge about the main difficulties in the activities of project managers allows to partially solve the causes of company project failures and measures to eliminate them (Oh, Choi, 2020).

The success of a project depends on various factors. Most of the authors outline three groups of factors affecting project management success: project management competence, organization, and project management methods and techniques (see picture No. 2).



*Picture 2. Project management success factors structure*

Source: M. Radujkovic, M. Sjekavica, 2017

According to the information detailed in the picture, it could be stated that the project management success depends on project manager and project team competencies. Also, the project's success is influenced by overall organization culture, structure, and climate. Implementing projects, it is imperative to choose the proper methods and tools, evaluate project risks and required resources.

M. Oh, S. Choi (2020) project success factors divide into four main groups: comfort, commitment, competence, and communication. Comfort represents the alignment among resources, involvement, and leadership. The components consist of proper funding through the project, resource availability, comprehensive contract documentation, continuing involvement of stakeholders, and competent project managers. Competence factor includes utilizing technology and experience, multidisciplinary and talented project team. Commitment describes the willingness and interest to achieve project success. Communication, the last component of the success factors, represents the effective and efficient information gathering and sharing among the project team.

N. Gruden, A. Stare (2018) analyzed behavioral competence's influence on project performance and success. The authors defined the main elements of behavioral competence and described their impact on project planning, management, control, and overall project success. The research results revealed that the most critical competence was project manager assertiveness.

M. Irfan, M. Khan (2021) identified two dimensions of project success factors: common and unique elements. Common elements cover time, cost, and quality. Distinctive characteristics cover organizational benefits, project impact, future potential, and shareholder satisfaction. Successful projects are believed to improve the overall reputation of the organization. Similarly, project success adds value and generates economic provisions for the parent organization. Organizations that finish their projects within limited resources gain competitive advantages.

A successfully implemented project can be considered a project where the goal and specific success criteria are achieved. As a rule, the project also had to be completed with high quality, on time, and within budget. In fulfilling these criteria, the project manager should also pay attention

to other measures, such as meeting stakeholders' interests and achieving business results. Indeed, project management has been actively used in companies (Horvath, 2019).

The project manager is entirely responsible for the success of the project, who needs to be competent in different areas of the project:

- Specific knowledge and skills of project management

As in any management area, project management has accumulated a great store of knowledge and practical methods for solving problems. Moreover, project management is a complex discipline, and the manager must be able to manage such different functional areas as a subject area of the project, time parameters of the project, cost and financing, quality, risks, personnel, communications, conflicts, deliveries and contracts, changes, security.

- Knowledge of the industry specifics of a particular project.

To manage a project in a particular area, the manager must have an idea of what this area is doing, what kind of work will take place within the project, be able to assess the qualifications of the personnel who will perform these works, make sure that the team has set adequate deadlines. If the project manager does not understand the area to be worked on, it will be challenging to implement successfully (Blazkovic, 2016).

- Personal characteristics.

Personal qualities are a form of manifestation of sustainable human behavior, his cognitive and practical actions, determined and socially approved (disapproved) based on situational, group criteria.

Emotional intelligence is one of the most critical factors of ineffective management in those aspects of this activity that are directly related to interpersonal relationships. Thus, the analysis of the problem of emotional intelligence is particularly relevant in terms of the phenomenon of leadership. The effectiveness of various management functions is much related to realizing a leader's potential. The emotional intelligence of a project manager is one of the most important aspects of his leadership profile. Developing these skills can significantly improve the efficiency of professionals' professional activities in management. Every project manager striving for project success must have the qualities of a leader because leadership is the art of bringing others together for a common goal. It has been found that "different leadership styles, leadership competencies contribute to individual and team achievement" (Hassan, Bashir, & Abbas, 2017, p. 74). Thus, both leadership and the right leadership style influence the success of a project.



All of the above follows that "competencies" are knowledge, skills, and experience in a particular area required from the participant and necessary to perform his functions effectively. Undoubtedly, a competent project manager takes on a strategic role in an organization whose competencies and effective collaboration with his team members are essential at all stages of project management. Emphasis is placed on project managers' managerial and emotional intelligence competencies, which will be necessary for future leaders. It is also imperative to emphasize the project manager's ability to focus and direct the team towards a goal to unleash its potential.

### 3 Project management success

When discussing successful projects, project success and project management success are the two most important concepts; these concepts attracted much attention to project management. Project management success seems to have similar definitions among different authors (table 5); it refers to traditional time, cost, and quality performance measurements. It means that the project is delivered on time, on a defined budget, and meets the predefined objectives (Mladen Radujkovića, Mariela Sjekavicab 2017).

*Table 5. Project management success in literature*

<b>Author</b>	<b>Definition</b>
<b>Mladen Radujkovića, Mariela Sjekavicab 2017</b>	Success in project management relates to traditional time, cost, and quality performance measurements.
<b>William Pinkerton 2003</b>	Project management success focuses on the project management process and the successful accomplishment of the project regarding cost, time, and quality. These three dimensions indicate the degree of the 'efficiency of project execution.
<b>Baccarini, D. 1999</b>	Baccarini stated that project success criteria consist of Project management success and product success. Baccarini also mentioned that Project management success covers meeting time, cost, and quality objectives.

Source: formed by author

#### 3.1 Project success

Project success is far more challenging to measure; for example, projects have multiple stakeholders with different views on the project's purpose and different expectations of what the project must achieve (Lyytinen & Hirschheim, 1987). These stakeholders could include people who initiated the project, those who fund the project, people who seek to benefit from the project, project team members, and those who maintain the project. Bannerman, P. L. (2008). Therefore, different stakeholders could have different expectations and anticipate different project outcomes; this issue is most common in development projects where the result of the project comes after the project is finished.

Table 6. Project success in literature

Author	Definition
<b>Rodolfo Siles</b>	Project success has been historically defined as meeting its objectives under budget and schedule.
<b>Chris Sauer, Andrew Gemino, Blaize Horner Reich, 2007</b>	Project success variously refers to "on time, within budget, to specification" completion; the success of the product produced; or success in achieving the project's business objectives.
<b>David Bacarinni, 1999</b>	cost, time, and performance are insufficient to measure a specific project's success, as we also need to consider the stakeholder's satisfaction and the quality of the project management process
<b>Harold Kerzner, 2009</b>	Kerzner stated that "in addition to time, cost, and performance or specification level, the project has to be completed: <ul style="list-style-type: none"> <li>• With the customers' acceptance</li> <li>• Without disturbing the organization's fundamental workflow</li> <li>• Without altering the corporate culture</li> <li>• With the least possible mutually agreed scope changes."</li> </ul>

Source: formed by author

Similarly, as in project management success, the three classic criteria are the most used measures of project success. The principal value of such a view is that it offers a simple way to measure the performance of a project and the project management assessment within the bounds of time, cost, and scope (Bannerman, P.L 2008). However, such an approach has significant limitations in evaluating the project; as listed in table 6, more success factors should be considered. For example, a project can be done exceeding the planned budget or after the declared period and still be considered as successful because it meets the expectations of the client or the business. This suggests two additional criteria for evaluating projects: product success and business success.

### 3.2 Product success

The most common view to measure product success can be defined before product development starts; when the company approves the project for new product development, some new customers or profit could be expected. Most companies measure products by these two numbers; if the project brings that settled amount of customers and earns the defined profit, the product can be considered

a success (Vyom Nagrani, 2014). As discussed earlier, Kerzner (2003) described project success as completion within a specified time, cost, and specifications and the acceptance of the product by client or user, what could be called product success. Kerzner also added additional components to project success: completing the project without 'disturbing the organization's fundamental workflow' and without changing the company's culture. These additional components intend to acknowledge that projects operate within established values and norms of behavior. If these components are met, the client is satisfied, and the product brings new customers and profit, the product can be considered a success.

### 3.3 Business success

Business success is an additional criterion when measuring project success; the primary standard for success in projects is to bring benefits to the investing organization. Bannerman, P. L. (2008) referred to these criteria as business or organizational measures. While project objectives relate to the goals in the project plan, business objectives refer to the goals in the business plan. While having projects in the organization, every project should contribute to the company's overall business strategy, and the investment made to projects should correlate to the organization's business goals.

*Table 7. Project success criteria*

<b>Success criterion</b>	<b>Description</b>	<b>Indicator</b>
<b>Project management</b>	The project design parameters are met.	<ul style="list-style-type: none"> <li>• Schedule met</li> <li>• Completed within budget</li> <li>• Project scope met</li> </ul>
<b>Product</b>	Products or the project's main deliverables can be related to different things such as building, service, bridge.	<ul style="list-style-type: none"> <li>• Specifications met</li> <li>• Requirements met</li> <li>• Client expectations met</li> <li>• Client acceptance</li> <li>• Client satisfied</li> </ul>
<b>Business</b>	Business objectives motivated to take on the project or what the business expected to achieve from the investment.	<ul style="list-style-type: none"> <li>• Business objectives met</li> <li>• Business benefits realized</li> <li>• Business case validated</li> </ul>

Source: formed according to Bannerman, P. L (2008)

### 3.4 IPMA perspective competence elements

International project management association (IPMA) breaks down competencies that individuals need to develop to manage projects successfully. IPMA presents three management domains:

project management, program management, and portfolio management. Based on this model, every individual must have specific competencies to manage projects. Individuals must have perspective competencies that address the contexts of projects and people, practice competencies that address personal and social topics, and practice competencies that address the specific practice competencies for managing projects. Competences presented in IPMA are as follows:

*Table 8. IPMA overview of the competence elements*

<b>Competence elements</b>		
<b>Perspective</b>	<b>People</b>	<b>Practice</b>
Strategy	Self-reflection and self-management	Project design
Governance, structures, and processes	Personal integrity and reliability	Requirements and objectives
Compliance, standards, and regulation	Personal communication	Scope
Power and interest	Relationships and engagement	Time
Culture and values	Leadership	Organization and information
	Teamwork	Quality
	Conflict and crisis	Finance
	Resourcefulness	Resources
	Negotiation	Procurement
	Results orientation	Plan and control
		Risk and opportunity
		Stakeholders
Change and transformation		

Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)

In this paper, perspective competencies will be covered and explained; later, the knowledge will be applied to project managers working in construction companies in Lithuania.

*Table 9. Strategy competence*

<b>Competence: Strategy</b>
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<b>Definition</b>	This competence describes how strategies are transformed into manageable elements using projects. Strategy competence and the ability to manage projects strategically highly correlate with the mission, vision, and sustainability of the organization
<b>Purpose</b>	This competence element aims to understand the strategy and strategic processes, thus enabling a particular management domain (project, program, or portfolio) to manage their project within the contextual aspects.
<b>Skills and abilities</b>	Analysis and synthesis of information; Entrepreneurship; Reflection of the organization's goals; Strategic thinking; Sustainable thinking; Contextual awareness; Result orientation.

Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)

*Table 10. Governance, structures, and processes competence*

<b>Competence: Governance, structures, and processes</b>	
<b>Definition</b>	This competence describes the understanding of and the alignment with the established structures, systems, and processes within the organization that support projects.
<b>Purpose</b>	This competence aims to enable the individual to effectively participate in and manage the impact of governance, structures, and processes on projects.
<b>Skills and abilities</b>	Leadership; Reporting, monitoring, and control; Communication planning and executing; Design thinking.

Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)

*Table 11. Compliance, standards, and regulation competence*

<b>Competence: Compliance, standards, and regulation</b>	
<b>Definition</b>	This competence describes how the individual interprets and balances the external and internal restrictions in a given area such as country, company, or industry.
<b>Purpose</b>	This competence enables the individual to influence and manage the alignment of the relevant standards and regulations within the permanent organization.

<b>Skills and abilities</b>	Critical thinking; Benchmarking; Adapting standards to specific organizations; Communicating standards and regulations; Leading by example
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Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)

*Table 12. Power and interest competence*

<b>Competence: Power and interest</b>	
<b>Definition</b>	This competence describes how the individual recognizes and understands informal personal and group interests and the resulting politics and use of power. This element defines how project stakeholders should identify how everyday influences relate to the project context.
<b>Purpose</b>	This competence aims to enable the individual to use power and interest techniques to achieve stakeholders' satisfaction and deliver the agreed outcomes within time and budget constraints.
<b>Skills and abilities</b>	Observing and analyzing psychological processes; Recognizing and using influence; Using power when appropriate; Discovering values; Revealing stakeholders' interests.

Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)

*Table 13. Culture and values competence*

<b>Competence: Culture and values</b>	
<b>Definition</b>	This competence describes how the individual's approach influences the organization's culture and values and the broader society in which the project is situated. Also, it includes the acknowledgment of individuals participating in the scheme of the consequences of cultural influences.
<b>Purpose</b>	The purpose of this competence is to enable the individual to recognize and integrate the influence of internal and external cultural aspects on the project approach, objectives, processes, sustainability of the outcomes, and agreed outcomes.
<b>Skills and abilities</b>	Values awareness; Cultural awareness; Respect for other cultures and values; Aligning to and working within different cultural environments;

	Dealing with issues related to cultural aspects; Bridging different cultures and values to achieve the project objectives.
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Source: created by the author according to IPMA Individual Competence Baseline, ver. 4 (ICB4)



#### **4 Research methodology**

This chapter explains the research methodology, provides a clear understanding of the research process and describes the selected case. The goal is to explain the research scope and each step necessary to justify the selected research methods and explain the data collection and analysis process.

This research study aims to identify the essential characteristics of project managers for effective project management in a construction-based environment. Therefore, the empirical research was set up to reach this purpose, classified as constructivist, qualitative, and exploratory. Constructivist research philosophy was chosen since the research object is an international construction company operating in an international environment that is necessary to reach the research goal. It is the most appropriate philosophy due to the nature of the research question. The focus is on the context of construction projects and an in-depth understanding of project management in a multi-project environment.

The pre-structured survey method with open questions was chosen; this free-form of the survey allows respondents to answer in open text format to answer based on their complete knowledge, feelings, and understandings. This means that responses to the questions are not limited to a set of different options. The qualitative type of survey does not aim to establish frequencies, means, or other parameters but to determine the diversity of some topic of interest within a given population. This type of survey does not count the number of people with the same characteristic (value of the variable). However, it establishes the meaningful variation (relevant dimensions and values) within that population (Harrie Jansen,2010).

Some leading topics, dimensions, and categories are defined beforehand in the pre-structured survey. Identifying these matters in the research units is guided by a structured protocol for questioning or observation. In the pre-structured case, the diversity to be studied is defined beforehand. The aim of descriptive analysis is only to see which predefined characteristics exist empirically in the population under the case study (Harrie Jansen,2010).

According to the purpose of the study, the applied research type is adopted. Construction-based companies can also use the findings during selecting managers that apply for the project management position to ensure that the candidate has the needed competencies and skills to achieve companies' vision and goals.

**This research study set the following objectives:**

1. To review theoretical approaches to project management and project success, its application in construction projects, and essential factors for its successful implementation.
2. To apply the theoretical knowledge to the qualitative empirical study of project success challenges and critical success factors in construction projects.
3. Identify the characteristics and challenges of project success factors in construction projects.
4. To provide conclusions and recommendations according to the received results

**4.1 Research design:**

- Research philosophy – Constructivism
- Approach – Inductive
- Methodology – Qualitative
- Collection method – Survey (open-ended questions)

**Information about the participants**

Respondents were selected randomly by searching construction companies on the Lithuanian databases (rekvizitai.lt). After reaching out to the selected companies, a short call with the administration was made and asked for contacts of their project managers. Project managers were contacted and presented with the research and asked to participate in the survey, sent to them via email.

**Criteria when selecting respondents:**

- Working as a project manager
- Working in a construction company
- Having successfully or partly completed project

**4.2 Data collection and analysis**

To collect qualitative data for this research, the pre-structured surveys with the employees working as project managers were conducted and analyzed. Survey was conducted in Lithuanian language, later translated to English by author.

The essential project success and management success factors were identified during the comprehensive literature review and considered during the questionnaire creation for survey.

These success factors corresponded to several questions, as shown in Table No. 13 that allowed the researcher to categorize the data.

*Table 14. Questions corresponding to success levels*

<b>Success level</b>		Question number (see Annex 1)
1	Project management success	3.1, 3.2, 3.3, 3.4, 4.2, 4.3, 6.2, 6.3, 6.6
2	Project success	4.1, 6.2, 6.3, 6.4, 6.5, 6.7, 6.8
3	Corporate success	3.4, 6.1, 6.2, 6.4, 6.5

Source: created by the author.

*Table 15. Respondent's profile*

<b>Respondent id</b>	<b>Position</b>	<b>Educational background</b>	<b>Time in the company</b>	<b>Time in the current position</b>
<b>RE 1</b>	Project manager	Civil engineering	2 years	2 years
<b>RE 2</b>	Project manager	Civil engineering	12 years	6 years
<b>RE 3</b>	Project manager	Civil engineering	10 months	10 months
<b>RE 4</b>	Project manager	Business management	About a year	About a year
<b>RE 5</b>	Project manager	Civil engineering	1,5 years	6 months
<b>RE 6</b>	Project manager	Project management	2 years	2 years
<b>RE 7</b>	Construction director	Civil engineering	5 years	4 months
<b>RE 8</b>	Project manager	Philosophy	2 years	7 months
<b>Re 9</b>	Project manager	Civil engineering	3 years	3years

Source: created by the author.

## 5 Results of the research

In this chapter of the study, the gathered empirical data analysis results are presented. We will discuss the findings of the pre-structured surveys conducted with selected respondents of construction companies. After all the answers and comments of project managers were gathered, 9 filled surveys of project managers were received that present project management success and project success in their companies. The characteristics that help project managers to reach such success were the main aim of the research. This chapter aims to find the relation between our gathered results and the success factors of project management and project success identified during the literature analysis, allowing us to conclude the characteristics needed to successfully manage construction projects.

### 5.1 Overview of project success factors in construction companies

The gathered information through the surveys with the project managers and analysis of project success during the literature allowed us to find the characteristics needed to manage construction projects successfully. As in the literature analysis, we have found out that the traditional success factors of project success are related to the time, cost, and quality of the results delivered. Similarly, results gathered by the survey add to this:

RE4 on project management success criteria: *“The project is considered successful if it was delivered on time and no spending over the budget was required.”*

Few respondents have mentioned not only the delivery of the project on time and within budget. However, they have added a profitability aspect that makes the project successful when it brings enough profit.

RE5 on project success criteria: *“Profitability, if the project is profitable, it is successful.”*

The profitability aspect can be related to budget planning. However, there are always alternatives to find cheaper materials needed in construction projects, and the project manager is responsible for such negotiation.

RE6 adds to the project success criteria: *“the most essential for our company is the profitability criteria; the more profit it brings, the more successful it is.”*

## 5.2 Overview of project management success factors in construction companies

Another part of a successful project is successful project management; participants were asked the criteria for successful project management in the survey. As explained earlier in the literature analysis, successful management is the delivery of projects with quality on time. Project managers have to ensure that the deadlines are met, the budget is not exceeded, and control the quality of works within the budget.

RE7 on project management success criteria: *“When project manager fulfills goals in the contract (goals for profit, all objects are delivered on time).”*

To have successful project management, it is not only looking after resources and the schedule. Project managers also have to take care of the project team and client.

RE8 on project management success criteria: *“Project manager is considered successful if our client is satisfied with our work performance and wants to work in the future; if the project is profitable enough; if managers and workers are satisfied with work conditions.”*

Perhaps one of the essential characteristics not so commonly mentioned in the literature was client satisfaction; in construction projects, the building objects are future homes, workplaces, or usable infrastructure that the clients will use. Indeed, the client's satisfaction is essential after the project is finished. One of the respondents added to this:

RE3 on successful projects: *“Every completed project brings three new ones to the company.” This saying is very accurate in construction projects since after the project is completed, the results are visible for everyone to see, and one word of the satisfied client could go a long way”.*

On the other hand, such satisfaction is not easy in construction projects. Since there are a lot of places for mistakes and errors in the building process, the clients hire other companies, which challenges the working team. Furthermore, a lot of documentation and reports need to be filled when one step is completed.

RE9 when asked about the outsourcing of the work: *“There can be checkups from other organizations that can come to construction object and look for errors, in the past, we did not*

*have such troubles. Sometimes client orders technical staff to evaluate the done work, which requires additional reporting.”*

RE7 adds to this: *“very often, every step requires reporting and sometimes additional documentation to the client and director of the company, sometimes to other governmental organizations.”*

This kind of reporting references one of the perspective competencies presented before (Governance, structures, and processes). Documentation and reporting is the area in construction projects where project managers spend a lot of their time. This requires skills mentioned in (ICB4) related to this perspective competence like leadership and strong communication. Strong communication was among the most frequently mentioned characteristics when respondents were asked, "what skills and abilities help you manage projects."

RE3: *“Ability to communicate with employees at any level of the organization, every project in construction is more or less the same, you apply to the same laws and regulations, start from nothing and create something so remember the work you have done before.”*

RE4: *Ability to predict the work time, palling time, ability to communicate with the team, ability to adapt to change.”*

### **5.3 Importance of communication**

Assertive communication is a must for project managers in the construction field. It ensures a stable project team and adds to the client's satisfaction. Communication competence was mentioned earlier in table no.3 of literature analysis:

Communication	owns the technique of negotiation. Knows how to justify the goals and objectives of the project. knows how to convey information so that it is understood and interpreted correctly
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Oh M., Choi S (2020) explained that communication competence has different attributes. Some of them may include the technique of negotiation, the ability to justify the goal and objectives of

the project, and the ability to interpret information so it would be easier to understand for project stakeholders. Alison Doyle, a career and job search expert, provides ten communication skills that requirers and managers want to see in employees, which includes:

- Listening
- Nonverbal communication
- Clarity and Concision
- Friendliness
- Confidence
- Empathy
- Open-mindedness
- Respect
- Feedback
- Picking the right medium

These communication skills were also mentioned by the survey participants in the table. No.16; see the respondents' skills that help manage projects in their companies.

*Table 16. respondents on skills and abilities that help to manage projects*

<b>Respondent</b>	<b>Mentioned skills</b>	<b>Mentioned abilities</b>
<b>RE1</b>	Attention to details; Specificity	Technical skills; ability to recognize problems
<b>RE2</b>	Keeping calm in all situations	Being friendly with others
<b>RE3</b>	Being punctual; leadership; goal-oriented	Ability to communicate at any level of organization
<b>RE4</b>	Looking for compromises	Confidence; time management; multi-tasking
<b>RE5</b>	Self-criticism, independence, stubbornness, consistency, attention to details	Ability to predict the work time, ability to communicate with the team, ability to adapt to change
<b>RE6</b>	Self-control, perseverance, being result-oriented, being productive	Negotiation skills; Conflict and risk management; Basic knowledge in law and politics
<b>RE7</b>	Communication	Being in control; planning abilities
<b>RE8</b>	Being flexible, accountable, diligent, loyal, and organized.	Problem-solving, analytical thinking, and leadership skills.

<b>RE9</b>	Communication, honesty, strategic thinking	Communication skills, previous experiences
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Source: created by the author

One communication skill that survey participants were asked further in the questionnaire was respect for others. People are more open to communication when their ideas are respected. Simple actions like using the name, making eye contact, and actively listening when a person speaks will make the person feel appreciated (Alison Doyle, 2017). It's not a secret that many immigrants coming to Lithuania are working in the field of construction, one of the construction companies, "Eikos Statyba" director for the local news portal 15min.lt stated that out of 155 people working in the company, around 100 are workers in construction, 20 of them are foreigners, 13 from Ukraine, and 7 from Belarus. Therefore respect for others, other cultures, and cultural awareness have significant importance in the construction field.

RE2 on cultural awareness: *“Sometimes other workers are slower than others. You have to tolerate and respect other workers the same and try to bring their best by motivating and encouraging them. Over the years I have worked with a lot of other employees but right now for some time the team is not changing, we respect each other, and it leads to our success.”*

RE3 on cultural awareness: *“It is very important, the number of workers from other cultures is increasing in construction, being cultural could help communicate better with other workers.”*

RE4 on cultural awareness: *“Cultural awareness, as well as respect to everyone, is critical. It is no secret that many people from third countries work in construction. Therefore, it is important to get to know and understand different cultures. Workers might feel discriminated if they are treated differently than local workers, this might have a huge impact as they might leave work or ask to be transferred to other teams.”*

RE7 on cultural awareness: *“It is crucial, sometimes I'm looking for good examples in other countries construction project, a lot of times I'm finding new solutions or innovations that helps me in my project.”*



Re8 on Cultural awareness: *“Yes, our company often works with clients from other companies, and the project I am managing right now is ordered from Germany. Good communication and knowing other values is always beneficial if you want to satisfy your client.”*

Having strong communication and high values and being responsible could make project managers be seen as leaders. Project managers are both managers and leaders. They are assigned by the performing organization to lead the team that is responsible for achieving the project objectives (PMI, 2013). As managers they conduct and achieve project objectives and as leaders they influence, guide and give direction to the team members (R.Muler, 2018). Leadership is another element of perspective competences that was included in conducted survey. Participants were asked “What role does leadership play in successful project management?”

Re 3 on leadership: *“Leadership is directly correlated with project success and contributes to the desired results”.*

Re 4 on leadership: *“An important one as he is responsible for the final result. The ability to lead people and motivate them is a must in every project”*

Re 6 on leadership: *“Leadership is important to bring together and motivate the team to achieve the common goal, in the right-direction”*

Re 7 on leadership: *“It has major role in the projects we manage. In our company we have a plan who communicate with who in what object. For example, Construction director is responsible for technical side of the project and any legislation related problems goes to deputy director. It is important to show good example in your role, since it could affect other people in the company”.*

Re 8 on leadership: *“Leadership is also very important because management behavior directly influences workers and managers. If managers lack this skill, there is a real possibility that workers or subcontractors will not be satisfied with the company”*

Re 9 on leadership: *“We have a great director in our company who is constantly trying to bring the best to its employees and motivates them to work, he provides additional resources to the projects so the team could be satisfied, and good workers are rewarded”.*

Another element that could influence the leadership of project manager that respondents have had different ideas about is the concept of use of power. As presented by IPMA Individual Competence Baseline, ver. 4 This competence aims to enable the individual to use power and interest techniques to achieve stakeholders' satisfaction and deliver the agreed outcomes within time and budget constraints. The survey participants were asked, whether the use power could

influence the overall project success. The answers to this question were very different, some supported the idea of use of power since it could benefit the project and increase productivity of workers, others stated that this kind of leadership is a bad and out-dated way of influencing.

Re1 on use of power: *“It could affect the project success positively, but it should not be an aspiration”*.

Re2 on use of power: *“I doubt it, using power to influence others is out of fashion”*.

Re 3 on use of power: *“In my opinion yes it could influence it but I have never used power to influence others”*.

Re 5 on use of power: *“Sometimes, but most of the times the use of power might turn against you”*.

Re 8 on use of power: *“Yes. Powerful and influential managers can inspire workers to achieve better results and decrease employee turnover rate”*.

Third element regarding leadership that was asked participants was about “leading by example”. Leading by example is another leadership style, where the project manager models the behaviour he wants to see in his team members. When leading by example, you do not need to push team members towards excellence- rather, you actively demonstrate that excellence. Leading by example is the difference between saying, “You can do this” and “we can do this together”. Through the support and encouragement in the former is great, the latter build connection camaraderie, and trust (Julia Martins, 2021).

Leading by example could be beneficial for construction projects, since most of them are handled by “waterfall” approach where a project is completed by distinct stages and moving from step to step. These steps can be the same or similar for different construction projects, therefore having previous knowledge and adapting it to the current projects is very beneficial. Leading by example is not only a concept which could be adapted by project managers but it could also be used in companies in general. Construction objects usually have big territories which are quite visible for the public and when executing the project the territory has to be covered by fence where companies working in the territory hangs posters with their company brand. If the construction company is handling the project with care, takes care of the territory, builds fast and with quality it could ensure that they will be hired in the future, RE2 adds to this:

Re 2 on leading by example: *“Good example is a path to other great works, if you finish your work and others are talking about it in good words you will always have success”*.

Re 3 on leading by example: *“Proper direction formation, as well as continuous control and supervision of actions will always ensure successful project management”*

Re 4 on leading by example: *“Of course it is. If the project manager is always late, or does not show a lot of interest in a project and does not put any effort in making project successful, the team might feel this and they will start doing the same because they might think why do we have to care if the main person does not. I, myself, always try to act the way I would others want to act and if I see some good practices from other project managers, I also try to adapt them in my project management processes”*.

Re 5 on leading by example: *“It is important, most of this is related to the communication, you should treat others as you would like to be treated, show good example in your work and everyone will follow”*.

Re 6 on leading by example: *“It is very important, when managers from higher positions shows good example and shares their knowledge the desired result might be brought faster”*.

Summing up, having good communication is essential for project managers in construction companies, a lot of attention is brought to the negotiation skills and finding cheaper resources and alternative sub-contractors. Elements necessary for good communication like cultural awareness, understanding that everyone have different values, treating everyone with respect and showing good example for other workers can add significant benefits for project success.

#### **5.4 Strategic thinking and strategic planning**

One of the abilities of great leaders is strategic thinking. Strategic thinking is an ability to constantly reinvent your view and find new solution to old problems. Some of the elements of strategic thinking include planning for the future, this concept is essential for managers in construction companies since there are various plans and reports to follow, also project managers in construction companies are taking care of multiple projects at the same time which requires good planning skills to succeed. Participants of the survey were asked if strategic thinking is important in their projects, some of the responses:

Re 2 on strategic thinking: *“Being organized helps to get the job done quickly, strategic thinking helps to be one step ahead in the works, so it has major importance in my company”*

Re 3 on strategic thinking: *“If you want to be step ahead you must have few alternative solutions to every problem”*.

Re 4 on strategic thinking: *“It is very important to have a strategic thinking when managing a project. First every project starts with the planning and in this early phase of a project, the project manager has to be able to think into the future, so to think about available resources, how big of his team will be and how this might affect the project’s duration and so many other important aspects of a projects”*.

Re 5 on strategic thinking: *“When your company is working on multiple projects at the same time you have to plan few steps ahead and know where to use your resources”*.

Re 7 on strategic thinking: *“Very important for construction companies, you must see in advance what certain projects will bring for the company and what difficulties it might cause, the sooner you see the problems the easier it is to mitigate them”*.

Re 8 on strategic thinking: *“Strategic thinking is very important in managing projects, we usually plan and calculate everything at least few quarters ahead”*.

Most of the respondents refer to strategic thinking as planning into the future. This ability leads to strategic planning, strategic planning is the systematic identification of opportunities and threats that lie in the future, which in combination with other relevant data provide a basis for a company’s making better current decisions to exploit the opportunities and to avoid the threats. It is a process that begins with organization goals and develops detailed plans to make sure that the goals are implemented (George A. Steiner, 2008). Strategic thinking and strategic planning is necessary for project managers in construction companies, to reach the goals of organization. Survey respondents were asked how the project they manage contribute to organizational vision and goals of their company:

RE1: *“Successfully completed projects directly ensure the implementation of the company’s strategic goals, it is an integral part of the company’s strategy and the achievement of the set goals”*.

RE3: *“Every successfully completed project brings three new projects to the company”*

RE8: *“We are a team that is able to take any project. We care about the goals and expectations of the clients who put their trust in us, which spurs us towards constant improvement. We measure our added value by the end result and transparent calculations.” In our project we strongly believe in company’s values and try to bring the best result to our clients”.*

RE9: *“We’re looking for growth and profit, client satisfaction, so every successful road or building we make is directly contributing to the strategy”.*

## **5.5 Challenges for project managers in construction projects**

Having previous mentioned characteristics and abilities helps to manage the project, however, managing construction projects has different side that is challenging to handle. One part of this includes outsourcing of the work done to other stakeholders or third parties involved in the project. Some of the stakeholders who require additional reporting and updating on any changes and risks include:

- The client
- Sub-contractors
- Construction inspection
- Public institutions

Survey participants were asked if works in their company has to be reported to other stakeholders or third parties and how such communication work:

RE1: *“All the work is presented to the customer, but when talking about third parties, the work must be submitted to few public institutions (State Energy Regulation Authority, construction inspectorate). Communication takes place in accordance with the law.”*

RE2: *“Trying to keep everyone happy, there are constant check-ups since we’re working with public institutions, but everything is usually in the contracts so just follow everything carefully and you will be successful.”*

RE3: *“Yes, there are other third parties involved, usually every institution has regulation and documentation you have to fulfill if you want to get your work phase approved, follow the documentation and you will be successful.”*

RE4 did not provide an answer to this question.

RE5: *“There are multiple reports that needs to be filled if you want to move from one stage of the project to another, usually the client hires a technical maintenance company that requires reporting of the jobs and who is constantly challenging every job done.”*

RE6: *“Yes, every stage is delivered to the client and needs to be approved, sometimes there are additional internal documents of the client that needs to be submitted, we also have some in our company as well.”*

RE7: *“Yes, it does, and very often, every step requires reporting and sometimes additional documentation to the client and director of the company, sometimes to other governmental organizations.”*

RE8: *“We have a constant communication with our clients through emails. We also have weekly and monthly reports. Some reports must be prepared for third parties.”*

RE9: *“Yes, there can be checkups from other organizations that can come to construction object and look for errors, in the past we did not have such troubles. Sometimes client orders technical staff to evaluate the done work which requires additional reporting.”*

Other challenges that construction project managers face includes state regulation laws. There are various laws in Lithuania on construction, these regulations are called construction law (statybu įstatymas). Some of the legal regulations include simple laws as wearing a helmet in construction site or hiring technical maintenance company, others are quite complex and requires various reporting or prepared construction plans. According to the Construction Law of Lithuania administrative and civil and criminal liability established by the laws of the Republic of Lithuania shall apply to legal and natural persons who violate this Law. Survey participants were asked if they face such regulations and how to solve such problems:

RE1: *“Construction projects have to apply to a lot of laws, and it can be checked by construction inspection at any times, sometimes construction can be stopped until everything is fixed. If you want to avoid such problems, you must comply with the law.”*

RE2: *“Yes, there are number of laws that influence construction project you have to oblige to the law, and make sure that everyone follows these regulations in construction site.”*

RE3: *“Yes on the daily basis, I’m always checking the governmental desicions that influeces construction, it is an essential part of the work.”*

RE4: Did not provide an answer to thisquestion.

RE5: *“Most of the times there are difficulties to get permissions from the governmental institutions to begin the construction process.”*

RE6: *“Yes, there are construction and energy reglamentations, governmental institution regulations. We have legal body in our company that assists with all the documentation.”*

RE7: *“Very often, there are a lot of different situations, every legal question goes to the deputy director, and he negotiates with other lawyers.”*

RE8: *“Yes, on the daily basis, but we have legal department who prepares needed reports and applies to the law, if there is some unclear things, they contact other managers for information.”*

RE9: *“There are a lot of laws we have to follow, but having legal department in the company helps to fill the documentation, as a project manager only certain information is needed to prepare but all communication and documentation are done by the lawyers.”*

Another set of challenges for project managers in construction projects were identified by the survey participants when they were asked about problems and bad experiences in previous projects:

RE1: *“Increased prices of raw materials; disturbance of work due to covid; additional requirements of client that were not mentioned in the contract.”*

RE4: *“There have been a few cases when there were a few miscommunication errors between the project manager and the client. This was due to the bad practice of the type of communication. The way of communication was changed to more structured and with a few additional rules this part of project management was improved. Also it is a common problem when we are not provided with a full information from the client or the client simply haven’t given a thought to some of project’s parts and we have to keep pushing the client to give us more information so we could move forward. This problem is specific to the project planning process.”*

RE5: *“There were a lot of situations when I started to work as a project manager when I felt like I was left alone and had to deal with a lot of problems on my own.”*

RE6: *“Most of the problems are due to generational differences. It is often easier for older people in construction to interact with more experienced project participants of a similar age. But at the same time, working with progressive and innovative people requires a different experience.”*

RE9: *“Most of the difficulties were with increased prices of the materials, we had longer projects, when we negotiated one price with the subcontractors but then with price increase the raw material prices increased as well and additional negotiations with the client were needed and they did not want to pay more, had to look for new subcontractors which delayed the project.”*

Most of the difficulties in construction projects are related to the planning phase, before the project official start, these challenges could be avoided if there is enough communication with the client and other project stakeholders. Thinking one step ahead during planning phase and dealing every step with the client is essential for project success, insufficient dialog and poor negotiation skills of the project manager could lead to low profitability of the project. Since most survey participants have mentioned that profitability in construction projects are the most desired criteria for project success, strong communication, strategic thinking are the main characteristics contributing to successful projects.



## 6 Conclusion

This thesis aimed to identify the main characteristics needed for project managers to successfully manage construction-based projects and determine critical success factors for project management. A survey was conducted with project managers working in construction companies to achieve this purpose. Analyzing empirical data gathered from a survey with the project managers allowed us to draw the following conclusions.

While conducting the survey, several observations were made about project management in construction projects. One of the essential takeouts is the classification of staff positions. It can be said that staff positions can be separated into three main categories:

- Managers
- Specialists
- Workers

The gathered results would be incorrect to state that the project manager position in construction projects was attributed to the manager category. In most cases, it would be more accurate to state that project managers are considered specialists; therefore, different evaluation criteria and requirements should be applied for this category. For example, characteristics like leadership are more necessary for the manager category and less critical for the specialist category. On the other hand, specialists are necessary to handle the technical side of the project, and leadership is still essential when managing the team. For this reason, perspective competence as use of power is not relevant since project managers in construction companies lack the authority in their company to make critical decisions.

While analyzing survey results, the primary responsibilities for project managers in construction companies were identified:

- Creating project schedules
- Maintaining project budget
- Managing the team, ensuring that team members meet the deadlines
- Preparing reports
- Managing risks
- Communicating with client and other stakeholders

For these responsibilities, and by gathered survey results, requirements for project managers in construction companies should be:

- Degree in civil engineering, project management, or related field
- Excellent planning and time management skills
- Previous experience as a project manager in construction projects
- Excellent communication and team management skills
- Ability to create and manage budgets
- Excellent negotiation skills

The study determined success factors for project success and project management success in construction companies. The success factors were identified while making literature analysis and confirmed by conducting the survey.

Project success factors: project delivered within budget, project schedule met, project completed with quality. The conducted survey showed additional criteria (profitability) for project success in construction companies, which most of the survey participants mentioned. The more profit the project brings to the company, the more successful it is.

Project management success factors: Client satisfaction; project delivered in time within budget and quality; reports prepared

To reach these success factors is not as simple as following the schedule. Project managers in construction companies face various risks and challenges; survey participants identified these conditions; most common challenges for managers were: exceeded budget, laws, and regulations on construction projects; additional requirements from the client, increased prices of raw construction materials.

Project managers have to develop specific characteristics and abilities to manage construction projects successfully. The main characteristics and abilities were identified in the literature analysis and were considered while doing the survey. Attempts were made to find links between project managers' competencies and the project's success. Some of the findings were:

Assertive communication is essential for project managers to be successful; communication helps manage the team and adds to client satisfaction, which is one of the essential factors for project management success.

There are many laws surrounding construction projects, and various reports must be made; therefore, understanding the governmental processes, laws, and regulations is critical for project success.

Excellent planning skills of the project manager are required to manage construction projects successfully. Studies have showed that project managers in construction companies are managing multiple projects simultaneously, which requires much planning, and additional planning in the future is critical for project success. Several survey participants identified that attention to detail and planning skills are core abilities of successful project managers.

When asked about challenges for project management, survey participants identified exceeding project budget and increased prices of raw materials. These challenges could be mitigated by the solid negotiation skills of the project manager. There are a lot of different sub-contractors, and possibilities are limitless; when enough attention is given and efforts made by project managers, cheaper alternatives could be found, which would increase the project's profitability and increase the project's success.

The study has shown that workers from different countries are prevalent in construction projects; survey participants also identified construction clients abroad. Therefore project managers should be culturally aware and respectful of different cultures. This competence would increase the team and client satisfaction which is a factor for project management success.

Finally, the survey showed a realistic view of project managers in construction companies and confirmed the terms and success factors mentioned in the literature.

## **6.1 Recommendations**

The study findings and conclusions do not allow us to general view all construction-based projects. However, it provides crucial practical insights relevant to the construction industry. Project managers and project specialists of construction companies could use the following recommendations to improve their approach to projects and improve their careers.

First, it is critical to spend enough time in the planning phase and negotiate all details with the client and other involved stakeholders to avoid confusion when construction begins. Enough

emphasis should be put on the contract, and every detail should be communicated with the client. This would allow us to ensure that possible risks could be avoided as early as possible.

Second, every characteristic could contribute to the project's success. Project managers could use any strong side they have to be successful managers. However, managers should consider increasing their attention to negotiation and communication skills when managing construction projects, as these skills are essential for successful construction projects.

Third, construction projects involve a lot of different stakeholders and interested parties. There are a lot of laws and regulations surrounding these projects. Therefore it is suitable for managers to know the law and follow any updates on the construction sector and oblige to the law.

Fourth, construction projects require assistance from different sub-contractors. With enough research and attention, together with negotiation skills, cheaper alternatives could emerge and increase the project's profitability.

## **6.2 Study limitations**

The survey makes it difficult to get accurate insights from project managers. Interviews would gather more profound knowledge about the sector and identify additional characteristics. The survey was conducted at the end of the year when much documentation needed to be prepared as project terms came to an end and new ones came. Therefore, it was impossible to find time for project managers to conduct interviews, and it was challenging to collect enough responses to the survey. The selected construction area narrowed down the possible candidates for the research since not all construction companies have project management offices. Another limitation is that this study only provides insights from project managers and no position from company directors or human resource analysts.

## **6.3 Implications for further studies**

This research provided insights into project manager perspective in construction projects and how to reach their success. However, there is a need for further research on this area. The research focused on perspective competencies presented in IPMA Individual Competence Baseline, ver. 4, people and practice competencies remain unexplored. Further studies could include these two

remaining areas and find additional criteria for successful project management in construction companies.

Another area for future studies could include the gathered results of this research and testing the identified characteristics by conducting a quantitative survey including project managers and workers, sub-contractors, and other stakeholders related to construction projects.

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## 8 Annexes

### Annex 1.: survey guide

Date:

Time:

Duration:

Respondent:

The main goal of this survey is to gather information about the characteristics of project managers that influence project success in construction companies. The essential characteristics needed to manage projects successfully will be the focus of the questionnaire. Furthermore, I am trying to understand other factors that help to handle the projects successfully. I want to thank you for your participation in this survey and your time. Also, I ensure that any person, project-specific or company-specific information will remain confidential.

#### 1. General information

- 1.1. How long are you working in this company?
- 1.2. What were your roles previously in this company?
- 1.3. What are your roles now? How long are you working in this position?
- 1.4. What is your educational background?

#### 2. Project information

- 2.1. What projects are you dealing with in this role?
- 2.2. How many team members, on average, are working together with you?
- 2.3. How many projects have you managed to work in this company?
- 2.4. How many of these projects have you managed successfully?

#### 3. Personal characteristic questions

- 3.1. What personal characteristics help you to manage projects?
- 3.2. What skills and abilities help you to manage projects?
- 3.3. What personal characteristics help you to communicate with your team?
- 3.4. What personal characteristics help you to fulfill your company's vision?
- 3.5. What personal characteristics do you appreciate the most in other managers?

#### 4. Successful project questions

- 4.1. What are the criteria to consider the project as successful in your company? Who decides that the project is successful in your company?

- 4.2. What are the criteria to consider project management success in your company? Who decides that the project management was successful in your company?
- 4.3. When is the project manager considered as successful in your company?
- 4.4. Based on previous experiences, have you had difficulties managing the project/ project team/ communication with stakeholders? What were they?
5. Candidate selection questions
  - 5.1. When you applied for your current position, what personal characteristics helped you get this position?
  - 5.2. What personal characteristics do you evaluate when selecting team members?
  - 5.3. What personal characteristics should employees consider developing to be successful project managers?
6. Perspective competence questions
  - 6.1. How do the projects in your company contribute to the company's vision and strategy?
  - 6.2. What importance does strategic thinking have in managing projects? Is reflecting on the organization's vision and goals necessary for project success?
  - 6.3. What role does leadership play in successful project management?
  - 6.4. Do projects in your company require outsourcing the work done to other organizations? How does such communication work?
  - 6.5. Do the projects you supervise have to face any laws or regulations that affect the project's progress? How do you solve such problems?
  - 6.6. Is “leading by example” Important for project management? How could it affect successful project management?
  - 6.7. Could the use of power and influence affect overall project success?
  - 6.8. Is cultural awareness critical when managing construction projects? How could it influence project success?

Thanks a lot for your dedicated time and provided answers! If you would like to add anything you find helpful or get the transcript of this survey, do not hesitate to contact me.

## **Annex 2, filled questionnaire**

Date:2021-12-17

Time: 17:30

Duration: 35mins

Respondent: RE7

The main goal of this survey is to gather information about the characteristics of project managers that influence project success in construction companies. The essential characteristics needed to manage projects successfully will be the focus of the questionnaire. Furthermore, I am trying to understand other factors that help to handle the projects successfully. I want to thank you for your participation in this survey and your time. Also, I ensure that any person, project-specific or company-specific information will remain confidential.

### General information

1.1. How long are you working in this company?

- 5 years

1.2. What were your roles previously in this company?

- Civil engineer, project manager

1.3. What are your roles now? How long are you working in this position?

- Right now, I am working as construction director for 4 months

1.4. What is your educational background?

- Higher education in civil engineering

### 2. Project information

2.1. What projects are you dealing with in this role?

- Renovation projects, reconstruction, new commercial construction

2.2. How many team members, on average, are working together with you?

- Around 50

2.3. How many projects have you managed to work in this company?

- Around 25

2.4. How many of these projects have you managed successfully?

- Most of the projects were successful

### 3. Personal characteristic questions

3.1. What personal characteristics help you to manage projects?

- Communication

- 3.2. What skills and abilities help you to manage projects?
- Being in control, Planning skills
- 3.3. What personal characteristics help you to communicate with your team?
- Searching for compromises, letting other team members talk first
- 3.4. What personal characteristics help you to fulfill your company's vision?
- Not standard thinking when looking for solutions
- 3.5. What personal characteristics do you appreciate the most in other managers?
- Innovation, communication skills
4. Successful project questions
- 4.1. What are the criteria to consider the project as successful in your company? Who decides that project is successful in your company?
- Profitability delivered on time and quality. The company's director makes the decision.
- 4.2. What are the criteria to consider project management success in your company? Who decides that project management was successful?
- When the project manager fulfills goals in the contract (goals for profit, all objects are delivered on time), the company's director makes the decision.
- 4.3. When is the project manager considered as successful in your company?
- When the project manager can control the team and the flow of the projects, plan the budget. Evaluate workers working poorly, but thoroughly evaluating the project manager is possible when the project is done. When it is successful, the project manager is successful.
- 4.4. Based on previous experiences, have you had difficulties managing the project/ project team/ communication with stakeholders? What were they?
- Most of the problems are due to generational differences. It is often easier for older people in construction to interact with more experienced project participants of a similar age. Nevertheless, at the same time, working with progressive and innovative people requires a different experience.
5. Candidate selection questions
- 5.1. When you applied for your current position, what personal characteristics helped you get this position?
- Communication and believing in myself, confidence
- 5.2. What personal characteristics do you evaluate when selecting team members?
- Depends on the position, mostly being professional, skills in previous projects, working experience.

5.3. What personal characteristics should employees consider developing to be successful project managers?

- Communication skills are essential for a project manager; having "cold" nerves also helps, time planning skills.

6. Perspective competence questions

6.1. How do the projects in your company contribute to the company's vision and strategy?

- Most of the projects contribute to profitability. Some of the projects increase the qualification of the company.

6.2. What importance does strategic thinking have in managing projects? Is reflecting on the organization's vision and goals necessary for project success?

- Very important for construction companies, you must see in advance what specific projects will bring for the company and what difficulties they might cause; the sooner you see the problems, the easier it is to mitigate them.

6.3. What role does leadership play in successful project management?

- It has a significant role in the projects we manage. Our company has a plan for who communicates with who in what object. For example, the construction director is responsible for the technical side of the project, and any legislation-related problems go to the deputy director. It is vital to show an excellent example in your role since it could affect other people in the company.

6.4. Do projects in your company require outsourcing the work done to other organizations? How does such communication work?

- Yes, it does, and very often, every step requires reporting and sometimes additional documentation to the client and director of the company, sometimes to other governmental organizations.

6.5. Do the projects you supervise have to face any laws or regulations that affect the project's progress? How do you solve such problems?

- Very often, there are a lot of different situations, every legal question goes to the deputy director, and he negotiates with other lawyers.

6.6. Is "leading by example" Important for project management? How could it affect successful project management?

- As a project manager or construction director, it is hard to show examples since I am doing much work that is not visible to other employees. It is more important for work managers in construction objects every day.

6.7. Could the use of power and influence affect overall project success?

- It depends on leadership style, I do not like to use power, but it might be beneficial for other managers.

6.8. Is cultural awareness critical when managing construction projects? How could it influence project success?

- It is essential; sometimes, I am looking for good examples in other countries' construction projects, many times, I am finding new solutions or innovations that help me in my project.