



**VILNIUS UNIVERSITY**  
**BUSINESS SCHOOL**

**INTERNATIONAL PROJECT MANAGEMENT PROGRAMME**

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**THE FINAL MASTER'S THESIS**

<b>PROJEKTO VADOVO KOMPETENCIJOS ĮGYVENDINANT TARPTAUTINIUS MOKSLO IR STUDIJŲ PROJEKTUS</b>	<b>PROJECT MANAGER COMPETENCIES IN INTERNATIONAL RESEARCH AND STUDY PROJECTS</b>
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Vilnius, 2024

## SUMMARY

VILNIUS UNIVERSITY BUSINESS SCHOOL

INTERNATIONAL PROJECT MANAGEMENT STUDY PROGRAMME

MILENA TAMOŠIŪNIENĖ

### **PROJECT MANAGER COMPETENCIES IN INTERNATIONAL RESEARCH AND STUDY PROJECTS**

Supervisor – Doc. Dr. Andrius Valickas

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As project-based work has recently become a common way of working and projects are a part of university life, it is crucial to study and investigate ways to improve international research and study project management. Literature analysis shows that the type and industry predetermine the competencies needed for project management. The study examines which are most important for international research and study projects from the International Project Management Association Individual Competence Baseline (IPMA ICB) for the Project Management perspective.

The study analyses the competency of project managers' leading international research and study projects funded by public authorities and seeks to find out the most important of them. For that reason, it is essential to implement a critical analysis of previous studies on the management of research and study projects and project management competencies to identify the perception of competencies needed to manage international research and study projects.

Research methods used: critical evaluation of scientific literature and qualitative interviews with experts. The qualitative research revealed thirteen essential competence elements for the international research project manager in all three competence areas by IPMA ICB for the project: perspective (two competence elements), people (five competence elements), and practice (six competence elements).

## SANTRAUKA

VILNIAUS UNIVERSITETO VERSLO MOKYKLA

TARPTAUTINĖ PROJEKTŲ VADYBOS STUDIJŲ PROGRAMA

MILENA TAMOŠIŪNIENĖ

### **PROJEKTO VADOVO KOMPETENCIJOS ĮGYVENDINANT TARPTAUTINIUS MOKSLO IR STUDIJŲ PROJEKTUS**

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Pastaruoju metu projektinis darbas tapo įprastu darbo būdu, o projektai - universiteto gyvenimo dalimi, dėl to labai svarbu studijuoti ir ieškoti būdų, kaip pagerinti tarptautinių mokslinių tyrimų ir studijų projektų valdymą. Literatūros analizė rodo, kad projekto tipas ir sritis lemia projektų valdymui reikalingas kompetencijas. Tyrime nagrinėjama, kurios iš jų yra svarbiausios tarptautiniams mokslo ir studijų projektams, remiantis Tarptautinės projektų valdymo asociacijos parengtu Individualių kompetencijų rinkiniu (IPMA ICB) projektų valdymui.

Tyrime analizuojamos projektų vadovų, vadovaujančių tarptautiniams mokslo ir studijų projektams, finansuojamiems valdžios institucijų, kompetencijos ir siekiama išsiaiškinti svarbiausias iš jų. Atliekama literatūros analizė apie tokio tipo projektus, projektų vadovavimo kompetencijas.

Naudoti tyrimų metodai: kritinė mokslinės literatūros analizė ir kokybinis ekspertų interviu.

Kokybinis tyrimas atskleidė trylika esminių tarptautinių mokslinių tyrimų projektų vadovo kompetencijos elementų visose trijose IPMA ICB kompetencijos srityse: perspektyva (du kompetencijos elementai), žmonės (penki kompetencijos elementai) ir praktika (šeši kompetencijos elementai).

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## INTRODUCTION

### Relevance and novelty

As project-based work has recently become a common way of working, it is crucial to study and investigate ways to improve such teams' working environments and conditions (Karlsen and Berg, 2020). According to the International Project Management Association's Individual Competence Baseline for Project Management (IPMA ICB) (International Project Management Association's Individual Competence Baseline for Project Management, 2015) "a project is defined as a unique, temporary, multi-disciplinary and organised endeavour to realise agreed deliverables within predefined requirements and constraints. Achieving the project objective requires these deliverables to conform to specific requirements, including multiple constraints such as time, cost, resources and quality standards or requirements". Research shows that project management practice varies depending on the different types of projects (Besner and Hobs, 2012). Identifying these variations has important consequences for practice and the study of practice, including the competencies needed. One of the project types is research and study projects funded by public bodies such as the European Commission (EC) or the Lithuanian Government, etc. It is a unique and specific type of project because of historical traditions and culture in the scientific world of universities and requirements from external funding bodies (Ernø-Kjølhede and Hansson, 2011). International projects are more specific as several institutions from different countries implement them. 2021-2027 Cohesion policy The EU budget for Research and Innovations allocated 650 million Euros in Lithuania (2021-2027 EU Funds Investments Program for Lithuania), not to mention additional Lithuanian Budget funds to research projects and direct EU funds. For example, the EU research and innovation framework programme Horizon Europe for 2021-2027 has a budget of 95.5 billion Euros for all eligible countries. The EU research and innovation framework programme aims to strengthen the EU's scientific and technological bases and the European Research Area, boost Europe's innovation capacity, competitiveness and jobs, deliver on citizens' priorities and sustain our socio-economic model and values. It also focuses on impacting the European Green Deal, the digital and sustainability transition and recovery from the coronavirus crisis (EC Funding & tender opportunities Single Electronic Data Interchange Area (SEDIA)).

Projects are an essential part of the success of universities (Cerezo-Narváez et al., 2019). The largest University of Lithuania, Vilnius University, carried out 871 projects in 2022 with a value of 233,941 787 EUR. 748 projects were in the research area and 67 projects in the

study area, with the values accordingly 112 197 424 EUR and 29 564 635 EUR (Vilnius University Performance Report, 2022). In 2022, Vytautas Magnus University carried out 282 research projects valued at 47 million Euros for Vytautas Magnus University (Vytautas Magnus University Report, 2022). In 2022, the Kaunas University of Technology researchers carried out 80 projects of international programmes (Horizon 2020, European Horizon, Digital Europe, EURATOM, EIT, LIFE, EUREKA, ERA-NET, etc.) and 161 national research, experimental development and innovation projects (Annual Report of Kaunas University of Technology, 2022). Vilnius Tech doesn't provide a report on projects in 2022 on their website.

In recent years, there has been no research about research and study project management and the competencies for such project management in Lithuania. Also, no studies were done about the specificity of international research and study project management. Birutė Mikulskienė, in the study book "Research and Development Project Management", acknowledges that public research and development institutions have different approaches to project management compared to private. The purpose of that study book is to review all research and development project management issues, focusing on duality research and development activities and adapting the project management techniques to the best needs (Mikulskienė, 2014). Still, there was no research on how those project management activities are adapted and used in daily life on research project management in universities of Lithuania and what competencies are needed to manage them. Therefore, it is vital to take a deep look into this topic.

### **Problem**

What competency profile should be adopted for project managers leading international research and study projects, and what competencies should be considered critical in the area?

### **Research object**

Project managers leading international research and study projects, funded by public bodies (i.e. EU funds, Lithuanian Research Council, etc.) and based in Vilnius University. International projects are projects implemented by two or more institutions from different countries. The project management competencies will be analysed based on the recent experience of leading international research and study projects funded by public bodies.

### **Purpose**

The study aims to identify the key competencies of project managers leading to the successful implementation of international research and study projects in the university funded by public bodies. Also, the study's author will pinpoint the practical implications of research

and share recommendations for international research and study project managers' competence development.

### **Objectives**

- 1) To implement a critical analysis of previous studies on the management of research and study projects.
- 2) To examine previous studies on the project management competencies.
- 3) To identify the perception of competencies needed to manage international research and study projects.
- 4) To provide recommendations for practical use on research and study project management competencies improvement.

### **Research methods**

- 1) Critical evaluation of scientific literature – theoretical analysis.
- 2) Qualitative interview (face-to-face expert interviews: 8 respondents).

### **Difficulties and limitations**

Although using quantitative and qualitative methods could give more value to the study, due to time and resource limitations, only one of the methods was chosen to implement. Also, it should be stressed that the management of different research and study projects was examined. The results may differ depending on the kind of science.

### **Structure of the work**

The study consists of a theoretical analysis of project management competencies presenting situational project management, the specificity of research and study projects funded by external public funds, and project management competencies, including project management competencies according to IPMA ICB. The part on the research methodology of international research and study projects managers' competencies presents the description of the objective of the research and the introduction of the chosen qualitative research method. The Data analysis and discussion display the competencies needed for international research and study project managers according to IPMA ICB. The generalisation and recommendations can be found in the Conclusions and recommendations part. The work also includes a Bibliography and two annexes.



# 1. A THEORETICAL ANALYSIS OF PROJECT MANAGEMENT COMPETENCIES

## 1.1. Situational project management

There are a variety of project management practices which seek to be seen as global standards in project management. The common belief of a “Best practice” in project management is widely held (Lehmann, 2016). “Lehman (2016) claims in scientific papers and articles that differences between project types are also commonly ignored”. Still, other authors believe the management style should depend on the project's type or situation, or there is a relationship between projects’ types, project managers’ personalities, and projects’ success (Dvir et al., 2006).

Project management contingency theory researchers sought the interplay between project needs and the matching management approach (Howell et al., 2010; Shenhar, 2001; van Donk and Molloy, 2008 in Lippe and vom Brocke, 2016). It is argued that the project management approach is the structural variable and must be adapted based on certain internal and contextual contingencies. In such a way, the project management is optimized and becomes most effective. Related project management contingency research seeks to identify influencing factors for various types of projects and circumstances (Lippe and vom Brocke, 2016). Studies have examined differences in project management practice between industries, project types, and contexts (Besner and Hobbs, 2012). According to situational project management, project managers must develop situational intelligence. They have to understand the specific situation, identify the most appropriate approaches, adapt their practices, and finally implement this responsive behaviour (Lehmann, 2016). When thinking about how to organize and structure the project, the project manager should consider the type of project (Wastian et al., 2015). Different project types require different skills and behaviours, meaning other competencies (Muller and Turner, 2007, as cited in Wastian et al., 2015). “Lehman (2016) claims Approaches that have led to success in certain situations may cause troubles in other situations still in the same project. Situational Project Management is then applying favourable practices in given project situations while avoiding other practices that are considered detrimental”. Situational project managers always learn to add new tools and techniques to avoid sticking to the same style of project management. As project management is a heterogeneous field, and most projects undergo changes during implementation, it is believed that having one and the best method is not the solution. Situational Project Management itself is not that solution. It is not designed to replace other methods or behaviours (e.g. waterfall type methods, agile

approaches), “it is rather a meta-approach that gives each method, behaviour and approach its place in a continuously growing toolbox of practices that a project manager should acquire over time and confidently use when the dynamics of success and failure require them” (Lehman, 2016). We argue that IMPA ICB is a favourable approach to Situational Project Management. Individual competence is the application of knowledge, skills and abilities to achieve the desired results. According to IMPA ICB, they must be in use “in the right manner and at the right time” (Coemans et al., 2019). Project Manager Competency Development Framework (PMCDF), issued by the Project Management Institute, also indicates that different competencies may appear more or less critical depending on the project type, characteristics, organizational context and maturity (Project Manager Competency Development Framework, 2017).

Several institutions from different countries implement international projects. The number of countries participating in the project may differ, putting one more aspect that should be considered while managing the project. This aspect is the multicultural team. Researchers highlight that “intercultural teams have a higher potential for exhibiting greater knowledge and creativity, but they also need more time and effort than monocultural teams to transfer that potential into actual productivity” (van Knippenberg and Schippers, 2007 in Wastian et al., 2015). Collaborative research, which engages researchers from different institutions and countries requires a high interplay between the researchers, the project structure, project governance and the research being done. As they are not a natural to academics thus leader must meet the team as it is and engage active leadership working at a distance (George and Thomas, 2015). Multicultural project team composition influences the competencies required to manage research and study projects.

It should also be noted that there are differences between public and private organizations and managers, including project managers. “In the public sector, the most important are ‘accountability’, ‘lawfulness’, ‘incorruptibility’, ‘expertise’, ‘reliability’, whereas the highest ranking private sector values are ‘profitability’, ‘accountability’, ‘reliability’, ‘effectiveness’, ‘expertise’, ‘efficiency’, ‘honesty’ and ‘innovativeness’ (Jałochaa el. at, 2014). Also, it should be noted that projects that get funds from public institutions have to obey their rules, requirements, and predetermined outcomes (European Commission, Funding and Tender opportunities, “How to participate”).

Our approach to situational project management follows the idea that depending on the project type (research and study project) and other peculiarities (funded by public authorities and international, implemented by public bodies), a set of most relevant project management

competencies is required. Although the attempt is to identify the collection of the competencies needed for international study and research projects funded by public authorities' management, it should be noted that no expectations to find universal and fit to all of such kind projects management competencies are carried on.

## **1.2. International research and study projects funded by external public funds**

Projects have become an essential instrument for the success and prosperity of universities. They have to face new challenges in globalisation and increasing complexity. At the same time, universities must think of ways to be funded to adapt to the changing environment (Cerezo-Narváez et al., 2019). To reach these objectives, universities initiate unique, concrete and temporary activities through projects funded by external funds, primarily the public. For this reason, teaching and research employees should promote a range of professional project management competencies to manage the projects in which they take part properly.

According to the Lithuanian Republic Science and Studies Law, three kinds of research are fundamental, applied, and research and development. Fundamental research is experimental and theoretical cognitive work carried out to acquire new knowledge about the nature of phenomena and observable reality without any specific application of the results obtained. Applied research is experimental or theoretical work carried out to obtain new knowledge and is primarily directed towards achieving particular practical objectives or tasks. Research and development are described as the systematic and creative activity of learning about nature, humanity, culture and society and exploiting the results. Although the kind of research may influence the requirements for project management competencies, in this study, we assume all three types as one, taking the research factor as most essential and uniting. The individual research projects are out of the scope of this research.

According to the Lithuanian Republic Science and Studies Law, a study - is a person who has completed at least upper-secondary education at an institution of higher education, following a study programme or completing a dissertation. In the context of projects in this work, study projects are defined as projects whose object or content is related to studies or study programmes and their development, quality assurance or organisation. Study projects do not include projects carried out by students during summer internships and student research semesters.

Also, it should be noted that external public funding bodies, such as the Lithuanian Research Council, European Structural Funds or the EC, fund most of the research projects considered. As mentioned above, projects that get funds from public institutions have to obey their rules, requirements, and predetermined outcomes (European Commission, Funding and Tender opportunities, 'How to participate').

The specificity of EU-funded projects affects the project management and competencies of the project manager required. International research projects funded by the EU are cross-national, cross-institutional and even multi-disciplinary. Hence, the manager has to cope with different national languages and cultures, as well as professional and institutional languages and cultures. Under such circumstances, the manager becomes a kind of "knowledge translator" responsible for facilitating processes that allow project participants to discuss and communicate about research created outside their academic and institutional fields. Also, it is noted that in cross-institutional research projects, the project manager has only very little formal authority over project participants and for that reason, they are not his subordinates but their peers (Ernø-Kjølhede, 2000). One more specificity of EU-funded projects is the higher potential for conflict when working across organisational, disciplinary and national borders. For this reason, the project manager's ability to solve disputes and design the research cooperation in a way which minimises conflict potential would seem for the author to be an essential skill for the research project leader.

Masiello shares his experience participating in two EU-funded joint projects in the article "Learning to Succeed in European joint projects: The role of the modern project manager – the flow-keeper" (Masiello, 2009). Presenting the impression about communication, culture, administrative complexity, lack of commitment and continuity, the author presents the requirements for a project leader. Masiello names the modern project manager the "flow-keeper" with technical artefacts at their disposal. Their role is to ensure communication, information, negotiation, listening and explaining, and focus flowing between all international participants of an extensive European network. As he claims, the modern project manager should be culturally aware and possess social skills redefined to understand and endure cultural differences and manage the complexity of EU joint projects with the "special needs" of the participating individuals. Also, it should be a norm for the "flow-keeper" to access help in times of difficulty. The essential factor mentioned in the article is the organisation's role in project management – "universities and research organisations ought to give attention to the practical needs of research management" (Masiello, 2009).

### **1.3. Research and study projects and project management**

The academy has often been viewed as one of the most traditionalistic and autonomous sectors, “characterized by its own rituals and rigid ranking systems, it has been portrayed as an institutional realm that is held together by what Max Weber might have termed a clan-like power structure, with distinguished professors serving as patriarchal figures who take quite a bit of prestige in demonstrating their idiosyncrasies as well as their autonomy and operating more as adhocracies or very decentralized bureaucracies, where decision-making power is located in the hands of respected and high-ranked research leaders, than centralized bureaucracies” (Fowler et al., 2015). In this context and tradition, project management may not have as much value as seen in post-bureaucratic movements, bringing professionalism and effectiveness. The dichotomy between research and project management is emphasised when project management taxonomy is considered “a necessary evil, an imposed rigidity, or just not appropriate to the work at hand” (Fowler et al., 2015). On the other hand, research is defined as being something qualitatively different from the particular projects subjected to project management. Project management is considered less critical than having research itself, which is of much higher status. One way of protecting research as something different is by clearly distinguishing between what the researcher is doing when s/he is involved in getting funding and what s/he does when doing research. When project management is viewed as part of the necessary obligation of funding authorities, the interest in applying project management tools and techniques is low. Authors appear to be seeing distinct acts of separation between research and projects when the scientific community believes that knowledge directs the research process rather than a predefined project plan, and it gives autonomy to researchers (Fowler et al., 2015). Studies make statements that research projects differ in many ways from development projects (Huljenic et al., 2005). Although researchers typically find technical challenges motivating, the new generation of projects has introduced project-related risks and organizational complexities beyond the range of their practice and training (Procca, 2008). Other authors reflect the same idea, stating that the academic management tradition was not the scope of academic training and, even contrary, the norms and values learned by researchers through their academic studies are typically contradictory to management (Husted et al., 2001). The policy of governments and international organizations to fund research as the project is seen as yearning to obtain more control and increase productivity (Ernø-Kjølhede and Hansson, 2011). Not all universities provide researchers with training in managing projects, which leads to cost and schedule overruns, under-delivery, frustration, or conflict within research teams (Honoré-Livermore et al., 2022).

“Ernø-Kjølhede (2011) research projects present as one-of-a-kind and focused on creating new knowledge or applying knowledge in new ways”. He also emphasises that research projects are complex, with difficult outcomes to plan, and the process towards the outcome may sometimes be somewhat chaotic. That is why research projects are supposed to be presented as “beyond the control of the project management” (Ernø-Kjølhede E., 2000). Research project management deals with the need to balance, as the author calls paradoxes, because of the culture of the research field and the obligations from project management: ambitions for autonomy work and decision making, cooperation and, at the same time, the competition of researchers with each other, unpredictability of research outcome and new research opportunities appearing during the project implementation, the hardship to interpret management information because of the uncertainty of end product and process, the knowledge inequality between the project manager and the individual researcher and the need to take risks to be innovative on the side of research culture and the other side of the management the obligation for strict project control, collective goals of the collaboration, predictability of the outputs and need to reduce risks to ensure the delivery of the results on time and budget.

Table 1

## Research culture vs. project management obligations

Research culture	Project management obligations
desire for a large degree of autonomy in their work and democracy in decision-making versus	the need for strict project control (adherence to budget and time limits)
researchers both co-operate and compete with each other in the project	joint goals of the cooperation
unpredictability of research outcomes and new research opportunities arising in the the course of the project	for predictability of project output
The lack of management information/difficulty of interpreting management information and uncertainty of end product and process (precisely what are we looking for and which is the best way to get there?)	The need to act as if there is certainty and make management decisions continuously
The knowledge asymmetry between the project manager and the individual researcher (the latter is often in a better position to make decisions regarding their research)	

The need to take risks to be innovative	The need to reduce risks to ensure the delivery of the the desired result on time and budget
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Source: Compiled by the author based on Ernø-Kjølhede, 2000.

The author also argues that the term “management” should be replaced by the term “leadership” as “management” is closely associated with authority when “leadership” with commitment, teambuilding, vision, treating people as peers and personal charisma. As research projects are run by researchers who are skilled and independent-minded, a project manager in research projects is likely to be more a leader than a project manager expecting strict subordination by issuing orders with authority (Ernø-Kjølhede E., 2000). It is supposed that creating a sense of shared leadership is crucial. In international research, participants are geographically dispersed and rarely communicate face to face; also, they come from different organisations. Also, researchers are believed to have no loyalty to the project manager. Therefore, they should be able to motivate, negotiate, persuade, or rely on the researchers’ inherent motivation. The project manager also has to tackle the situation when team members are involved in many different activities at one time (teaching, administration or other projects), thus has to be engaged in a competition over project participants’ other responsibilities and priorities, taking time such as students, employers and other project leaders.

The management of research and development projects is emphasized as highly important by Andrew E. Procca, stating that “without great management, the success of Canada’s science and technology projects and therefore the future economic well being of Canada is at risk of being marginalized“ (Procca, 2008). Three specific cultural characteristics of scientific personnel are: antibureaucratic, prefer communal culture and dislike top-down organisational changes; flourish intellectually demanding assignments, esteem independence and flexibility to seek different lines of research; inquisitive and devoted to pursuing knowledge for its own sake and maintain strong individualised personalities; identify more with their profession than an organisation, generally choose working more with things than peoples, want to authorise their reputation through publishing and have the assumption that research and development managers will have a scientific or engineering qualification. Many researchers attribute all those cultural factors to scientific personnel (Maccoby, 2006; Brown, 1999; Clarke, 2002b, Office of the Auditor General, 1994 in Procca, 2008). Procca summarizes

those characteristics as independence in thought, word and action, which makes scientific personnel, in general, difficult to manage using classical management techniques.

Procca conducted quantitative research surveying the members of the National Research Council of Canada: advanced research support, management, project management and scientists (Procca, 2008). The responses indicated that the National Research Council of Canada's culture demonstrates belief in integrating the project manager and scientific leadership role, research independence, and disbelief in the efficacy of project management practices on research and development projects. The fourth factor, team orientation, while demonstrating a solid belief, was canvassed in only two questions so that it may be weighted inaccurately. Still, the scientist should have project management competencies when the project is large or complex. The suggestion from Procca is to train in project management techniques to improve their competency. The other advice for when a person may be unable or unwilling to develop the competency to fulfil the project management role is an adaptation of the project manager model. The project scientist could delegate the financial management and time responsibilities to a project manager while retaining responsibility for technical performance and the project as a whole.

Research projects are more likely to have a higher level of uncertainty, requiring a team of higher-skilled performers. According to the Uncertainty Complexity Pace model, this would require a project management style more heavily weighted toward leadership than management (Dvir et al., 2003 in Procca, 2008). It would also require efficient but less formal communication structures. "For projects of higher complexity, the need for more formal command, control, and communications is in potential conflict with the optimal management style for leading a research team" (Procca, 2008). According to Procca, insights about solid cultural issues should assume that a non-scientific manager should be in absolute charge of a research project "only as a last resort" (Procca, 2008). The author believes that if a project manager is not a scientist, s/he should try to form a strong collaboration with a leading scientist using the servant-leader style.

Fowler, Lindahl and Skjöld discuss the application of project management in universities based on an empirical study (Fowler et al., 2015). Traditional project management was developed for the linear execution of pre-defined tasks/goals, countering the iterative research and knowledge-building trajectory. They found that with the projectification of research projects through funding mechanisms, researchers "indeed feel compelled to appropriate and use project management to become viable for funding". (Fowler et al., 2015).



Finally, the authors list three modes of resistance to project management: (1) believe that project management requirements in projects “have little relevance for how the research should be carried out”; (2) projectifying the administration separately from the research work, and (3), division of labour between researchers and project administrators.

Evelyn Honoré-Livermore, Knut Robert Fossum and Erik Veitch conducted the study on academics’ perception of systems engineering and applied research methods. As researchers are challenged today to separate and balance their time between research, engineering, education, and project management, the practical implication of their study is that projects to a greater degree, separate the engineering and research tasks assigned to researchers to enable the researcher to focus on value-adding activities (Livermore et al., 2022).

For some authors, monitoring tools and management are not transferable to research projects (Powers and Kerr, 2009) because they downsize the innovation potential.

Anibal N. Cassanelli, Gonzalo Fernandez-Sanchez and Maria Clara Guiridlian, in their article “Principal researcher and project manager: who should drive R&D projects”, analyse the hypothesis that in research and development projects, the principal researcher is accepted as the coordinator or project manager, responsible for project management financing, managing contracts, resources, costs, time, scope, risk and uncertainty, communication, stakeholders and uncertainty, communication) on the top of research activities (Cassanelli et al., 2016). The literature review demonstrates the belief by scientists that the business approach of project management can increase research bureaucracy and reduce the autonomy of the research team. Research and development don’t end with agreed planning. Also, the authors detect the opinion that project management tools and methods can’t be and shouldn’t be converted into academic research. Still, there is a strong belief that the principal researcher is the project manager simultaneously, although the principal researcher does not have enough time, competencies, or training in project management (Cassanelli et al., 2016). As in the industry, there is a closer approach to project management, including innovation projects, authors suggest that research and development projects at universities would be separated into two collaborative knowledge areas: research and development management and project management. Those two distinct roles are believed to add higher value to research and development while having better knowledge and skills.

EC 2015 developed and supported PM<sup>2</sup> project management methodology. It has four editions, with last in 2021. The purpose of PM<sup>2</sup> project management methodology is to enable project managers to deliver solutions and benefits to their organisations by effectively managing the entire lifecycle of their project. It is stated that PM<sup>2</sup> has been created with the

needs of European Union Institutions and projects in mind and is transferrable to projects in any organisation. In the introduction, the PM<sup>2</sup> Guide is presented as a light and easy-to-implement methodology which project teams can adapt to their specific needs. The guide is created with globally accepted project management best practices in mind, captured in standards and methods. “It is the European Commission's official PM methodology, drawing on PMBOK, PRINCE2, IPMA-ICB, CMMI, TEMPO, and operational experience from EU institutions to include features from a variety of generally recognized best practices in project management (Kourounakis and Maraslis, 2015 as cited in De Marco and Mangano, 2023)”. The PM<sup>2</sup> Methodology provides a project governance structure, process guidelines, artefact templates, guidelines for using the artefacts, and a set of effective mindsets. PM<sup>2</sup> states that the use of the methodology improves the effectiveness of project management by improving communication and the dissemination of information, clarifying expectations as early as possible in the project lifecycle, defining the project lifecycle (from Initiating to Closing); providing guidelines for project planning; introducing monitor and control activities; proposing management activities and outputs (plans, meetings, decisions); providing a link to agile practices (Agile PM<sup>2</sup>).

Alberto De Marco and Giulio Mangano review the project management practices in Horizon2020 EU-funded research and development framework programme projects (De Marco and Mangano, 2023). This programme is the financial instrument to ensure Europe’s worldwide competitiveness with a budget of about 80 billion EUR from 2014 to 2020. The authors conducted the research and stated that project management techniques are considered to be exploited while managing the EU-funded Horizon2020 programme’s projects. They asked questions about scope, time, cost, quality, human resources, communication, risk, integration and stakeholder management. Researchers concluded that project managers play a crucial role in achieving the expected project results, and detailed cost management is considered a vital part of project management practice. Researchers noticed that human resources management is lower than the other areas, and the highest scores were given to cost management and communication management. It should be noted that no discussion or question was raised considering the project manager's background. Authors, without discussion, acknowledge that project management methods, tools and techniques may be used in research projects and are an efficient way to implement projects.

#### 1.4. Project management competencies

The Oxford Dictionary defines competence as “the ability to do something successfully or efficiently” (Oxford Languages). Cambridge Dictionary says competence is “the ability to do something well” (Cambridge Dictionary). The Global Lithuanian Encyclopedia gives a more detailed definition of competence as the functional ability to perform an activity adequately and to have sufficient knowledge, skills and energy for it. Project management is complex; what competencies are required to do it successfully or efficiently, and what knowledge and skills are crucial to perform well?

The need to define project management competency was erased over fifty years ago when the Project Management Institute was established (Horvath, 2019). The Project Management Institute published the first project management white paper, "Ethics, Standards, and Accreditation Committee Final Report", in 1983 to create a standardised knowledge base and framework of professional expertise (Seymour and Hussein, 2014). It was the basis for the Project Management Body of Knowledge, published in 1987. The International Project Management Association (IPMA) started the first individual certification. It published the first edition of its standard “Individual Competence Baseline” in 1998 with an attempt to define “project management competence” and to create one more competence model.

Viktoria Horvath provides a comparative review of the definitions of project management competence, makes a comparative analysis of professional project management competence models and standards and introduces a two-dimensional model to understand better project management competence in the article “The project management competence - definitions, models, and standards and practical implications” (Horvath, 2019). She states that different standards use different definitions for the term “project management competence,” due to the various natures of project management competence, the academic world also suggests a variety of definitions, and there is no consensus in this respect. So, to understand the complexity of the problem, we should also keep in mind that “in many cases, the same term is used with different meanings or the same phenomenon has different names” (Horvath, 2019).

There are also two different views on professional competence in the literature: the first is “the competency model”, called the attribute-based approach of competence, and the second is “the competency standard”, meaning the demonstrable performance approach to competence. According to the competency model approach, competency derives from personal attributes, and the competency standard approach emphasizes performance (Horvath, 2019). The author compares Zacks' (1999) and Quinn et al.'s (1996) competency components. Zack distinguishes those competence elements: declarative knowledge, procedural knowledge and

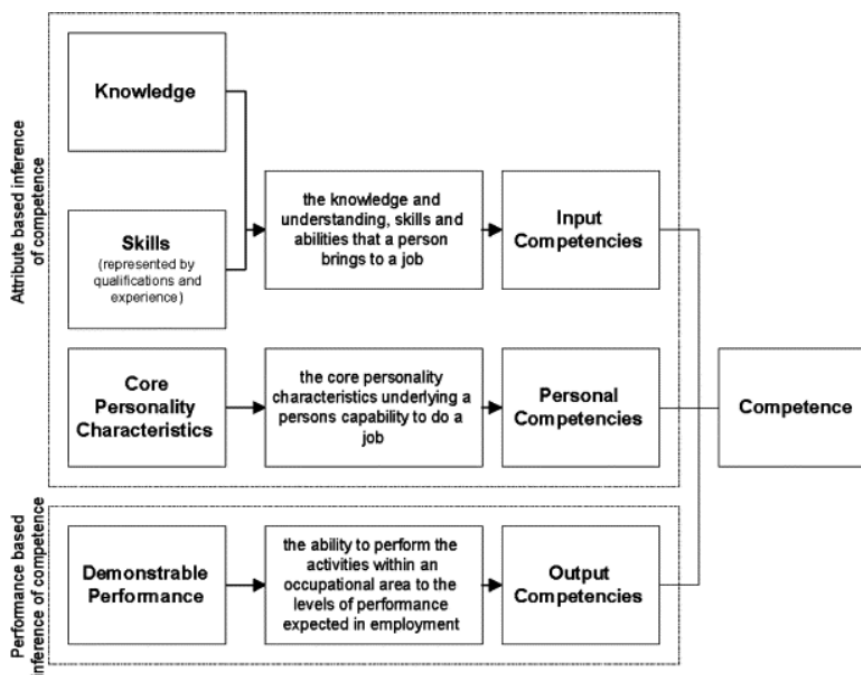
casual knowledge (Zack, 1999 in Horvath, 2019). Quin et al. introduced competency components: cognitive knowledge, advanced skills, systems understanding and self-motivated creativity (Quin et al., 1996 in Horvath, 2019).

Dulewicz and Higgs divided competency into three groups: intellectual (critical analysis and judgement, vision and imagination, strategic perspective), managerial (engaging communication, managing resources, empowering, developing, achieving) and emotional (self-awareness, emotional resilience, motivation, sensitivity, influence, intuitiveness, consciousness) with a total of 15 competencies counting in all three groups (Dulewicz, V. et Higgs, 2003 in Horvath, 2019).

L. Crawford developed the integrated model of competence, bringing together the competency model (attribute-based approach) and competency standards (performance-based) (Crawford, 2005). Crawford's integrated competence model includes the three main competence components: input, personal and output competencies. Input and personal competencies come from attribute-based inference of competence knowledge, skills and core personality characteristics. Output competencies come from the performance-based inference of competence of demonstrable performance (the ability to perform the activities within an occupational area to the levels of performance expected in employment) (Crawford, 2005).

Figure 1

#### Integrated model of competence



Source: Crawford's Integrated model of competence (Crawford, 2015)

M. Görög, in his project management competence model, distinguishes the project management competency from the project manager's competency (Görög (2013b) in Horvath, 2019). In his model, knowledge, skill, and attitude are three components of project management competence. On the top, the project manager's personal characteristics and leadership style are included as influencing the actual workplace performance of the project manager. The six most important personal characteristics of the project managers identified by M. Görög are optimism, emotional intelligence, team building, building trust, motivation and improvisation (Görög (2013b) in Horvath, 2019). After thoroughly analysing the literature about project management competencies, V. Horvath concludes that "project management competence distinguishes three main knowledge areas. The components of this triple division focus on the context, the project management tools and techniques, and the human aspect" (Horvath, 2019).

Understanding and applying knowledge, tools, and techniques recognized as good practices are insufficient for managing projects effectively. It also requires specific skills and general abilities (Cerezo-Narváez et al., 2019). According to Cerezo-Narváez, almost all project management standards are process-oriented, and only a few are competence-based, defining the specifications needed for people to perform well in project environments. Those project management standards are process-oriented and prescribe procedures and methods, and the other group presents the knowledge and skills that organizations demand for success in project tasks (Cerezo-Narváez et al., 2019).

People relate to each other in organisations and teams depending on their communication ability. According to Hedieh Shakeri and others, "the project manager, as the person responding to the stakeholders, should have a good understanding of issues related to psychology and the labour force because the project is a temporary organisation and does not provide people with much time for long-term communications" (Shakeri et al., 2021). Cserhati and Szabo (2014) stated that communication, cooperation and leadership are more relevant to the success of projects than other criteria. Ninety per cent of a project manager's time is spent on project communications (PMI, 2017) (Shakeri et al., 2021). Many studies show the success of a project depends on the communication skills of the project manager (Van Den Hooff and De Ridder, 2004, Maylor et al. (2006), Hyvari (2007), Zavadskas et al., 2010, Sivasubramaniam et al. (2012), Montequin et al. (2014), Anantatmula, (2015), Liu and Cross (2016) in Shakeri et al., 2021). In addition, it should be noted that the geographical distribution of the project team and stakeholders and the lack of a common language are essential issues in effective communication (Senaratne & Ruwanpura, 2016 in Shakeri et al., 2021).

The value of “soft” skills in project management was the reason to search for the tools and ways to improve and foster them. One of the concepts introduced and received growing attention in the project management community is mindfulness. Daniel and others state this is “probably due to its proven beneficial effects at individual, team, and organization levels in other management domains” (Daniel et al., 2022). The authors present six groups of research about mindfulness in project management. One of them is Mindfulness as an enabler of individual and team self-regulation. Research shows that mindful attention improves project actors' performance via decreased stress as a buffer to individual psychological distress and project performance, contributing to learning from project failure through self-regulatory mechanisms (Leung et al., 2016; Liang and Leung, 2015; Mubarak et al., 2022; Shepherd and Cardon, 2009; Shepherd et al., 2009 in Daniel et al., 2023). Also, mindful attention at the team level contributes to effective forecasting and enhances project task engagement, enables effective knowledge sharing and is considered as helping to cope with conflicts (Dane and George, 2014; Duryan and Smyth, 2019; Jugdev and Wishart, 2014, Pitagorsky, 2012 in Daniel et al., 2023).

There is a variety of project management competency standards, some of which to mention:

Project Manager Competency Development Framework (PMCDF), published by Project Management Institute;

Individual Competence Baseline for Project, Programme and Portfolio Management (IPMA ICB), published by International Project Management Association;

PM<sup>2</sup> Project Management Methodology, published by the European Commission Centre of Excellence in Project Management.

PMCDF states that Competency for the portfolio/program/project manager consists of three separate dimensions – knowledge, performance and personal competence:

Knowledge competence. What the portfolio/program/project manager knows about applying processes, tools, and techniques for portfolio/program/project activities.

Performance competence. How the portfolio/program/project manager applies portfolio/program/project management knowledge to meet the project requirements.

Personal competence. How portfolio/program/project managers behave when performing activities within the portfolio/program/project environment, their attitudes, and core personality characteristics.

IPMA ICB presents three competence areas:

People competencies are the personal and interpersonal competencies required to successfully participate in or lead a project, programme or portfolio.

Practice competencies are the specific methods, tools and techniques used in projects, programmes or portfolios to realise their success.

Perspective competencies: the methods, tools and techniques through which individuals interact with the environment, as well as the rationale that leads people, organisations and societies to start and support projects, programmes and portfolios.

According to PM<sup>2</sup> Project Management Methodology, competency describes the skill and capacity required to complete (project) activities. PM<sup>2</sup> Project Management Methodology states that project managers need to:

Understand the project management methodology used in their organisation;

Have the technical competencies required to effectively manage the initiation, planning, execution, control and closing of a project;

Have skills to work effectively with people and within the broader organisational context. These include the contextual and behavioural skills necessary to manage complex projects with diverse teams and stakeholder groups with pluralistic and conflicting priorities.

It is also added that subject-specific knowledge (e.g. IT, policy, etc.) is often relevant and helpful to a Project Manager's role.

According to the PM<sup>2</sup> Project Management Methodology, the main competencies for Project Managers in this guide are adapted from IPMA ICB. If we compare them to IPMA ICB, we will see that they are not adapted but copied.

The table below shows the project management's (IPMA ICB)/project manager's (PMCDF) competencies in the abovementioned standards.

Table 2

The comparison of project manager/management competencies in PMCDF and IPMA ICM

PMCDF - PROJECT MANAGER COMPETENCIES		IPMA ICB - PROJECT MANAGEMENT COMPETENCIES		
Performance Competences	Personal Competences	Perspective	People	Practice

<ul style="list-style-type: none"> <li>• Project Integration Management</li> <li>• Project Scope Management</li> <li>• Project Time Management</li> <li>• Project Costs Management</li> <li>• Project Quality Management</li> <li>• Project Human Resource Management</li> <li>• Project Communication Management</li> <li>• Project Risk Management</li> <li>• Project Procurement Management</li> <li>• Project Stakeholder Management</li> </ul>	<ul style="list-style-type: none"> <li>• Communicating</li> <li>• Leading</li> <li>• Managing</li> <li>• Cognitive ability</li> <li>• Effectiveness</li> <li>• Professionalism</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy</li> <li>• Governance, Structures and processes</li> <li>• Compliance, standards and regulations</li> <li>• Power and interest</li> <li>• Culture and values</li> </ul>	<ul style="list-style-type: none"> <li>• Self-reflections and self-management</li> <li>• Personal integrity and reliability</li> <li>• Personal communication</li> <li>• Relationship and engagement</li> <li>• Leadership</li> <li>• Teamwork</li> <li>• Conflict and crisis</li> <li>• Resourcefulness</li> <li>• Negotiation</li> <li>• Results orientation</li> </ul>	<ul style="list-style-type: none"> <li>• Project design</li> <li>• Requirements and objectives</li> <li>• Scope</li> <li>• Time</li> <li>• Organisation and information</li> <li>• Quality</li> <li>• Finance</li> <li>• Resources</li> <li>• Procurement</li> <li>• Plan and control</li> <li>• Risk and opportunity</li> <li>• Stakeholders</li> <li>• Change and transformation</li> </ul>
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Source: Compiled by the author based on IPMA ICB and PMCDF.

### 1.5. The project management competencies according to IPMA ICB

There are several reasons why IPMA ICB was chosen as a standard for analysing the competencies for the management of research and study projects. The first reason is that the EC uses it in PM<sup>2</sup> Project Management Methodology, and the EU is one of the prominent donors for international research and study projects. The other reason is the IPMA ICB's intention to support a wide range of audiences across many users, including researchers and educators.

The IPMA ICB version 4 was introduced as part of the IPMA 50<sup>th</sup> anniversary in October 2015 (Vukomanović et al., 2016). It took more than four years to develop the



document. “Even though ICB3 explained the IPMA Certification system, ICB4 omitted the certification component, with IPMA favouring independence from the certification and instead created a standard that could be used by multiple audiences” (Vukomanović et al., 2016). The IMPA ICB was created to support a wide range of audiences across many uses. Among other audiences, those are mentioned - researchers and educators. Possible benefits for researchers: a new standard for research development, the basis for papers and conferences, and a platform for team-based research. Potential uses for educators - updating the curriculum, guidelines for teaching projects, programme and portfolio management, and the opportunity for better training tailored to more specific roles.

According to IPMA ICB, “the weight of the various competencies needed to successfully realise a project differs between types of projects (e.g. IT, production, research and development) and industries (e.g. construction, business services and government). Nevertheless, in every project, all competencies are relevant”.

The three competence areas represent IPMA ICB project management competencies: People, Practice and Perspective, with 29 competencies. The competence areas are split into competencies, called elements of the competence areas: People (10 elements), Practice (14 elements) and Perspective elements (5 elements). Each competence element is presented by definition, purpose and description. Also, it lists the knowledge and skills one needs to demonstrate in order to master that competence element. Related competence elements are listed. The elements are further broken down into key competence indicators, which differ by project, programme and portfolio domain. A total of 134 indicators are presented for PM, 124 indicators for the programme and 105 indicators for portfolio management. The indicators are presented by description and measures which are used to assess the proper performance. The detailed table of all IMPA ICB Competence areas, competence elements and key competence indicators for projects is presented in the Annex 1 of this work.

## **2. RESEARCH METHODOLOGY OF INTERNATIONAL RESEARCH AND STUDY PROJECTS MANAGERS' COMPETENCIES**

### **2.1. The objective of the research**

The literature analysis shows that the project type, industry and external objectives are essential in project management. As different conditions determine the way a project should be managed, the project manager usually is the one to decide which project management tools and methods to use.

The academic environment has its own culture with the perception of project management and project management requirements for research and study projects. The need for extensive autonomy, unpredictability of research outcomes and research opportunities with the need to take risks, and a team of highly competent in the content area researchers on the one side compete with the obligation for strict project control, time and budget limits, predictability of project output and need to reduce risks to ensure the delivery of the results in time, scope and budget meeting quality requirements.

Because of the global changes, funding opportunities and funding bodies' requirements, a shift in the perception of project management may be seen. Literature analysis shows that at the beginning, the efforts to put research and study projects into project management requirements were evaluated as an attempt to reduce the autonomy of the researcher or even destroy the research process itself. The research culture has a history of hundreds of years, and researchers met the obligation to put research into the project management concept or acquire project management competencies determined by the top (funding authorities) with a dose of dissatisfaction. As the funding authorities didn't change their model for requirements to project application and reporting, the researchers had no choice but to adapt. This adaptation may be traced in the recent literature as researchers analyse project management in the field of research, study, or education as standard practice. Still, it should be noted that there is not much research on this topic, though the number of projects funded by public authorities is increasing, together with the budget dedicated to it.

Some articles raise the question of who should manage the research project – the researchers themselves or “professional” project managers. No one answer is presented, and the topic is still under discussion.

Also, the literature analysis shows that the competency of project management is a complex phenomenon examined by researchers. It is not enough to have “hard” skills to manage projects, and the knowledge of project management techniques, tools and methods is

only one of the areas to know. “Soft” skills are to be also important. To summarise, the literature on project management competence distinguishes three main areas of interest: context, project management tools and techniques and the human aspect.

Although project management standards are process-oriented, some of them are competence-based. Those define the specifications needed to perform in the project management area. The IMPA ICB describes a comprehensive inventory of competencies that an individual needs to develop to successfully master the work package, the project, the programme, or the portfolio that the individual is tasked to manage. It should be noted that only the part dealing with project management in the IMPA ICB is analysed in this study.

As literature analysis shows, there are a variety of project management competence theories and standards. To answer the question of which project management competencies are most important for project managers leading international research and study projects, one of the theories or standards needs to be chosen. The decision was taken to analyse data according to the IMPA ICB (for project management).

IMPA ICB (for project management) was chosen as a standard to analyse the competencies for the management of research and study projects because:

- EC, which is one of the prominent funding bodies for international research and study projects, uses it in PM<sup>2</sup> Project Management Methodology;
- covers a variety of competence elements also mentioned by project management competence researchers;
- It intends to support a wide range of audiences across many users, including researchers and educators.

The research object is project managers leading international research and study projects funded by public bodies (i.e. EU funds, EU structural funds, Lithuanian Research Council) and based in Vilnius University.

International projects are projects implemented by two or more institutions from different countries.

The project management competencies will be analysed based on the recent experience of leading international research and study projects funded by public bodies.

Vilnius University is the oldest and largest Lithuanian higher education institution, with over 430 years of academic traditions. Since its establishment in the 16<sup>th</sup> century, Vilnius University, as an integral part of European science and culture, has embodied the concept of a classical university and the unity of studies and research. Also, Vilnius University is an active

participant in international scientific and academic activities and boasts many prominent scientists, professors and graduates. Scientific development and the expanding relations with global research centres have contributed to the variety of research and studies at Vilnius University. According to a national ranking, Vilnius University is the first University in Lithuania. This is Lithuania's leading academic institution and is ranked among the top 400 universities worldwide (QS) (<https://www.vu.lt/en/about-vu>).

The Strategic Plan of Vilnius University (2020) states eight long-term objectives. Two of them are research at a high international level and interdisciplinary and international research and studies. One of its indicators – is “international recognition of research: an increase in the number of top-level international research grants (ERC/MSCA IF/Coordinated Horizon Europe projects) (50%)”.

By focusing on national leadership and international recognition, Vilnius University tends to create conditions to ensure the prospect of high-level research and the strengthening of scientific potential by preparing and implementing development programs for individual fields/areas of science. Also, it is stated that to increase the international competitiveness of research, Vilnius University will use the best practices to educate young researchers (doctoral and postdoctoral), strengthen the competencies of researchers to successfully participate and lead in international project activities and networking, promote interdisciplinary research integration, create an international research environment by bringing together highly qualified researchers.

During 2022, a total of 871 projects were implemented in Vilnius University. The tables below indicate the number of projects by type and values.

Table 3

The value of the projects implemented by Vilnius University in 2022

TYPE OF PROJECT	NUMBER OF PROJECTS	VALUE ADMINISTERED BY VU, EUR	VALUE FOR VU, EUR
EU investments	287	177,402,418	165,309,687
National budget	421	35,125,187	33,813,228
International funds/programmes	162	21,405,512	16,209,701
Other	1	8,670	8,670
<b>Total:</b>	<b>871</b>	<b>233,941,787</b>	<b>215,341,285</b>

Source: Vilnius University Performance Report, 2022

Table 4

The financial value and number of the projects implemented by Vilnius University in 2022 by type

TYPE OF PROJECT	NUMBER OF PROJECTS	VALUE ADMINISTERED BY VU, EUR	VALUE FOR VU, EUR
Infrastructure development project	18	86,656,725	81,868,118.00
Project in the research area	748	112,197,424	103,689,375.68
Project in the study area	67	29,564,635	24,693,819.28
Other	38	5,523,002	5,089,972.48
<b>Total:</b>	<b>871</b>	<b>233,941,787</b>	<b>215,341,285</b>

Source: Vilnius University Performance Report, 2022

## 2.2. Qualitative research method

According to Vaižauskaite and Valavičienė (2016), Qualitative interviews are based on open-ended questions expected to elicit the broadest, most detailed, most open-ended answers possible, formulated and presented by the research participant, reflecting their perspective. The interviews explore opinions, attitudes, experiences, motives, feelings, etc. Thus, interviews are conducted when the researcher wants to learn from people what cannot be seen directly - we cannot see/observe feelings and thoughts; we cannot replicate behaviours or interactions that took place some time ago; we cannot make sense of the meanings people give to the world around them; and many more.

The qualitative research method was chosen to put as many voices of experts as possible into the perception of research and study project management competencies. If using the quantitative method, the predefined elements of project management competencies could be understood by each expert differently. In the chosen case, semi-structured open-ended questions open the possibility of getting the experts' experiences, opinions, and attitudes.

According to Creswell and Creswell (2019), qualitative research is interpretative research, and the inquirer is involved in a sustained and intensive experience with participants. Therefore, it introduces various strategic, ethical, and personal issues into the qualitative research process. The research takes place in the natural setting, relies on the researcher as the

instrument for data collection, employs multiple methods of data collection, is both inductive and deductive, is based on participants' meanings, includes researcher reflexivity, and is holistic.

Craswell and Craswell present such research designs:

- the study of individuals (narrative, phenomenology);
- the exploration of processes, activities, and events (case study, grounded theory);
- the examination of broad culture-sharing behaviour of individuals or groups (ethnography).

In this study, the exploration of individuals is chosen. Eight semi-structured interviews with experts were conducted. The interviews were conducted in the Lithuanian language. The questionnaire in Lithuanian and with translation into English is provided in the Annex of the study (Annex 2).

The participants of the research are experts. An expert is a person who has specific insights and knowledge on their professional position and experience (Flick, 2014 in Vaižauskaite and Valavičienė, 2016). The experts were chosen according to the criteria presented in the table below.

Table 5

The criteria for choosing experts and their value

the experience in managing international research and study projects where Vilnius University is the project coordinator or	not less than 2 projects
the experience in managing part of the international research and study project, where Vilnius University is the project partner and	not less than 2 projects
the monetary value of the project or the share of the project (in case Vilnius University is the partner)	100 000 EUR

Source: Compiled by the author

Seven international research and study project managers were interviewed face-to-face, and one research and study project manager was interviewed during the online meeting on Teams. The names of experts are disclosed. Information about the experts is provided in the table below.

Table 6

The information about experts, the place and the length of interviews

The code of the expert	Experience in international research and study project management	The place of the interview	The length of the interview (hours:minutes:seconds)
E1	2 projects, the team member of more than 4 projects.	The office of the expert	0:52:24
E2	more than 2 projects. From year 2006.	The office of the expert	0:52:50
E3	more than 2 projects, the team member of international projects from approximately 2014.	The auditorium of Vilnius University	1:03:21
E4	Approximately 50 projects. As a coordinator in more than ten projects from year 2003.	The auditorium of Vilnius University	0:58:19
E5	17 projects from the year 2002.	The office of the expert	1:05:27
E6	2 projects.	The auditorium of Vilnius University	0:47:40
E7	20 projects from the year 2003.	The Teams video call	0:33:40
E8	Approximately 5 projects from the year 1995.	The office of the expert	0:52:06

Source: Compiled by the author

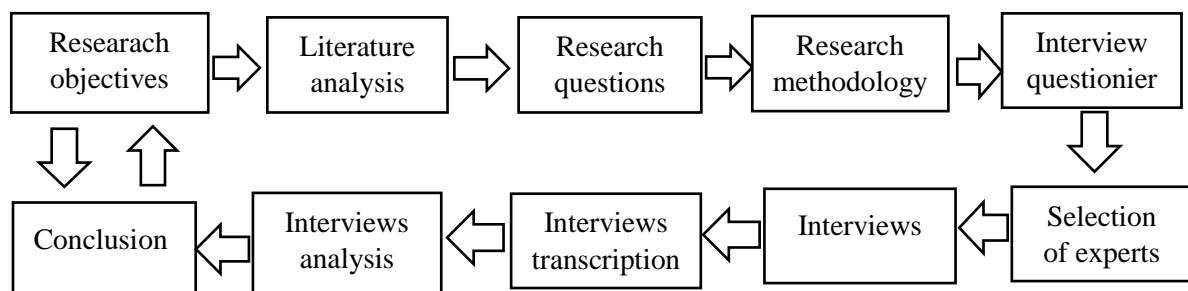
The interview was semi-structured with open questions. Data was recorded using the audio recorder. The Interview protocols were conducted.

According to Klakegg (Pasian and Turner, 2015), “it is difficult to isolate the researcher from the research. Whatever the researcher believes or assumes about the world, and about research, will inevitably put colour and scent to his or her research activities and findings”. The study needs to address the role of the researcher: past experiences, history, culture, and how this potentially shapes interpretations of the data (Creswell and Creswell, 2019). For that reason, it is important to note that the author works at Vilnius University in the project administration team and has more than ten years of experience working in the European Social Fund Agency, which is one of the project funding agencies in Lithuania.

The figure below presents the stages of the Qualitative Research Process the author engages in.

Figure 2

Stages of the Qualitative Research Process



Source: Compiled by the author

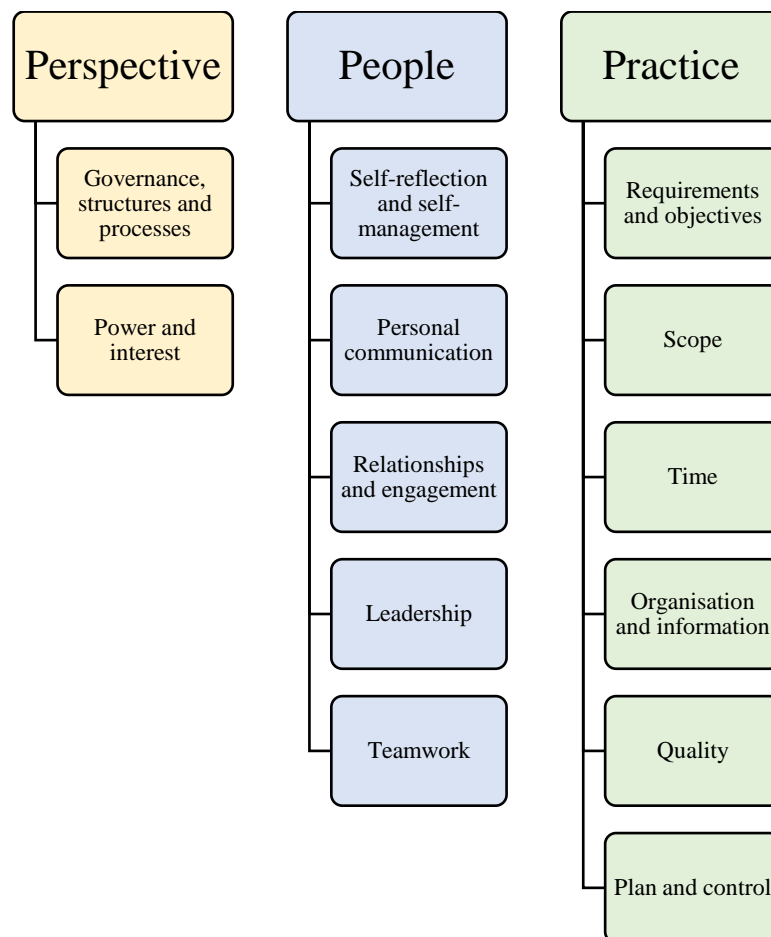


### 3. DATA ANALYSIS AND DISCUSSION

The analysis of interviews with experts disclosed 13 essential competence elements from IPMA ICB in all competence areas: perspective (2 competence elements), people (5 competence elements), and practice (6 competence elements) for the international research project manager. They are presented in the figure below.

Figure 3

The most critical project management/project manager competencies for research and study projects



Source: Compiled by the author based on the analysis of experts' interviews

It is important to note that experts mentioned competence elements of Finance and Procurement mostly because they are happy that other team members cover those functions. It

is perceived as an important part of project management but attributed to other personnel. Such function division is perceived positively.

### **3.1. The competence area perspective**

According to IPMA ICB, the competence area perspective applies to the context of a project. It defines five competence elements: Strategy, Governance, structure and processes, Compliance, standards and regulations, Power and interests, Culture and values. As every project is started, driven, supported and governed by external drivers, they are influenced by organisational, societal and political contexts. The strategy usually has clear goals and projects supposed to contribute to those goals. Competence element Governance, structures and processes is the formal context of the project. Compliance, standards and regulations comprise the relevant laws, regulations, standards and tools that reflect the priorities, best practices and demands of the organisation, industry, society and professional regulatory bodies. Power and interest deal with informal contexts influencing the success of projects. As people have personal goals and objectives, they are not just driven by the formal rules and objectives of the organisation.

The analysis of the experts' interviews shows that three competencies out of five in the competence area perspective may be presented as taken mostly into consideration in managing international research and study projects. Those competencies are Governance, structures and processes, Power and interest and Compliance.

#### **3.1.1. Governance, structures and processes competence element**

The governance, structures and processes competence element characterise the comprehension and alignment with the established structures, systems and processes of the organisation that provide support for projects.

E6 enthusiastically summarises that “The profile of the ideal international project manager is that of a super bureaucrat who is very familiar with the processes within his/her own institution, plus he/she looks at other institutions to find out what the processes are, how things work”. It is also vital for the international project manager to know the structures, systems and processes of other organisations which participate in the project. E3 asserts “And there is no way to assume that they manage projects at the same administrative level as we do. No way. We need to listen to what they say, to be informed in time, to be reminded in time”.

All experts tell what kind of support they get from other departments or dedicated persons concerning the management of the project. It's presented not only as an advantage and

help but also as one of the reasons to engage in project management. E7 expressed herself that “VU has that team, the Science Department, and there are professional financiers. I am really happy. Everything is done, everything is perfect, there is no stress, and you get what you ask for. If it wasn't, it would be a challenge because my colleagues in other universities in the same project didn't use it, they didn't use that, they didn't manage to organise something and so on. I'm still working in another research institution; I don't even start a project there; I implement where I'm asked, but I don't bring my part of the project [as project manager]. Because I know that I will have to do all the administration and finances myself. And I don't have the time to read those *talmuds* myself. At VU, it is not a challenge”. E5 mentions that “financial reports, how to count, ‘Name’ [tells the name of the person – the note of the author] does for us for these two projects”. While talking about reporting, E3 states “if the PR [payment request – the note of the author] document is, in a sense, a report, it is a matter for the [project – the note of the author] manager with the administrator and the financial officer when there is a change in what is being changed, the manager and the administrator, involving those who are being changed”. E4 and E8 mention finance project manager in the context that this position is the one project manager needs to obey in certain situations: “I do a lot of things voluntarily, on impulse, if I'm told to sign, by the financier [then I sign – the note of the author]” (E4); “We read it, then the financiers say you can't do this. If I am told I can't do that, I won't” (E8).

Other experts refer to one more kind of structural help – project administrators. “In ‘X’ [names the faculty – the note of the author] faculty they have administrators, best practice in X [names the faculty – the note of the author] faculty that they help” (E4). One of the experts was a newly hired employee and didn't know the internal rules and structures of the University. She states this experience as unfavourable for project management: “Once we had won it [project was funded – the note of the author] it would have been important for me, maybe even for the application stage, I'm very sorry that nobody told me that Vilnius University employs people separately for work in the project, on top of research position. How could I have known, it is so illogical. How could I have known that it is possible to work 1.5 FTE at Vilnius University when the European Union Labour Code says 40 hours a week and that's it (E1)”? E1 makes the conclusion that “the project should be managed by someone who has experience in the institution”.

It is crucial for a project manager to know the processes of the organisation that provide support for projects and integrate them into project management as equal value to other project management works. “It is very important for the project manager to understand the importance of administrative work. The role of the administrator and the financial officer is very important.

The team per se as a whole has to work together, trust and recognise the importance of each other. If the project manager writes off the administrator, who will want to spend too much effort? The scientist should be in charge, but they should have team members to help him” (E6).

According to the interviews with experts, project managers should understand how projects are handled within the organisation, including knowledge about partner organisations. This helps manage the project and may even be the reason to decide to become or not to become a project manager. The competence element Governance, structure and processes should be required to manage projects effectively.

### **3.1.2. Power and interest competence element**

The power and interest competence element illustrates how the person recognises and understands informal personal and group interests and their influence on the project. Not only formal regulations and standards but also informal contexts resulting from personal and group interests make an impact on the project. According to IPMA ICB, the purpose of this competence element is to enable the person to use power and interest techniques to achieve stakeholder satisfaction and deliver the agreed outcomes on time and within the frame of the budget. For that sake, a project manager has to acknowledge that people may have different ambitions and interests. “Being able to identify the ambitions and personal interests of people (stakeholders, team members or colleagues) is often necessary in order to work with them in an efficient and effective way) (IPMA ICB)”.

The ability to engage this competence element in order to achieve better results was noticed in the interviews with experts. When asked “What motivates you personally the most to participate in projects”, E2 said “It's great for me when, for example, our funding [in the institution – the note of the author] is very modest and the scientific ambition is there, and you need the hands to do the work, and the hands need to be paid. That's what happens through projects. You can keep people. Not only your ambition, they have ambition too. ‘The field of science’ [names the field of science – the note of the author] is an expensive science”. E5 also mentions how much of importance it is to match the interest of the project with broader team members' interests: ‘We try to make their themes coincide with the project's work and themes, then it's a win-win situation for both the project and us. We have colleagues with whom we can develop a topic, which is consistent with the project. That is the best option”. E1 express that it is an honour to be the manager of the project, but it is also important to make other members

of the team think that it is an honour for them, too: “I need to think, and I want more for them [for team members – the note of the author]. To make them feel that it's also theirs”.

Project managers also have their means how to reach joint decisions faster:

“E4 It must be, it is very good to have different partners, different opinions and different discussions, but somebody has to shape it in some direction. In my several projects there is a debate, a difference of opinion. But I say we have a limited time, it is not that we can discuss endlessly. Everything.

R Who makes the final decision?

E4 Well, everybody has to make it; it won't work if it's just a leader, not a dictatorship. You have to know how to turn it delicately so that everyone thinks they have come up with it themselves. Maybe there is an art to where you are trying to get to. And for the children and for the pupils to approach it as if it were their idea. Already 20 years ago, in some meetings, I already put it up in advance. People need to get used to it, especially if it's a new idea. Ideas and already some of the leaders say, I think I came up with this. Okay, here's my idea. If it becomes like their idea, then it's fine. It's not easy to achieve that, but you still have to have some; everybody in the project knows a lot. You can never get away with completely new proposals. You have to people get used to it. Or you say maybe it's good, but it probably won't be approved. [People will ask – note from the author] And why? Or is it nothing? I think you would not be able to approve it here, although I want them to approve it and then they start to listen. It's all sorts of tricks to have”.

E1 thinks that it is easier to manage the projects if you have very personal relationships and good experiences with team members. She compares project teams with family – “there has to be room for unpleasant personality traits, and that only happens when you've had some nice things or some good experiences with someone. Those good experiences make up for the crap you give. Like with family members. Well, it's unpleasant, but we'll bear with it”.

During the interviews, only two experts provided information about the competence element of compliance, standards, and regulations. This competence element includes an individual's capacity to balance, interpret and enable external and internal restrictions from the country, company, and industry (IPMA ICB). It deals with an individual's ability to manage the alignment of the relevant standards and regulations within the project. E3, as an essential part of the work, presented the analysis of documentation: “What's the need, because I read all the documentation what's written because I kind of read everything that's written. I read everything, the requirements, the hooks, the nuances, the abstract things. E6 states “In the context of international projects, you need a clear understanding of your responsibilities from

the start. What are the responsibilities of the institution you represent in the project? Then you need to be very familiar with all the legal documents”. On the other hand, there is an expectation that the project manager will have consultancy and help on legal topics: “Just reading the consortium's agreement takes time and understanding. I think the project manager could use his team for that. If you have a team, ideally, it should consist of people with legal and bureaucratic literacy because it's difficult for a project manager to be universal. All the skills to have. Especially for a science project, either no legal knowledge or a poor bureaucrat’ (E6).

Not all project managers present the competence element compliance, standards, and regulations as highly important. More likely, it is expected that the skills and knowledge of this competence element will be covered by other personnel, like project finance manager, project administrator or public procurement officer. E8 says, “Sometimes there are these reports and requirements, and you need to hire administrators to translate it into people's language“.

### **3.2. The competence area People**

According to IPMA ICB, the competence area People handles the personal and social competencies of the person and defines ten competence elements: Self-reflection and self-management, Personal integrity and reliability, Personal communication, Relationships and engagement, Leadership, Teamwork, Conflict and crisis, Resourcefulness, Negotiation, Results orientation. Personal competencies start with the ability to self-reflect and finish with the satisfaction of stakeholders when agreed tasks are done successfully. Basic personal attributes are discussed in Self-reflection and Self-management; personal integrity and reliability when communicating with others are described in Personal communication, Relationships and engagement. As IPMA ICB states, projects increasingly rely on Leadership. The two crucial aspects of leadership are detailed in Teamwork and how to manage Conflict and crisis. Resourcefulness focuses on the ability to create an open and creative team environment and describes the ways of conceptual and holistic thinking. Negotiation defines how to reach results acceptable to other parties and the projects. Results orientation characterizes actions in which an individual can inspire their team for optimal results.

The analysis of the experts’ interviews shows that five competencies out of ten in the competence area People may be presented as taken into consideration for international research and study projects manager. Those competencies are Self-reflection and self-management, Personal communication, Relationships and engagement, Leadership, and Teamwork.

### 3.2.1. Self-reflection and self-management competence element

According to IMPA ICB, Self-reflection is the ability to acknowledge, reflect on and understand one's own emotions, behaviours, preferences and values and to understand their impact. It is also the ability to set personal goals, check and adjust progress and cope with daily work systematically.

Managing international research projects for the experts is not the only position. They also have other, primarily academic research or teaching positions in the University. In this context, the ability to acknowledge, reflect on and understand emotions, behaviours, preferences and values on one hand and the ability to set personal goals and cope with daily work systematically play important roles:

“Lots of different activities. First of all, my main activity is not a project, my main activity is teaching, working with students. Main position. I have quite a heavy workload. Then in the project I'm basically running the communication plan, collecting information about the communication elements, coordinating meetings, making sure that there is an app, that there is a list of participants. <...> To have photos. I ask someone to take care of putting it together. Then the article - to remind them that it's going on, if I'm involved in writing, I write articles, also I have to consult which journal to choose. If a web page has now had to be created then I put both the web page and the material. I coordinate what to put, I write those publicity articles. Finances, I coordinate who goes where, what are the problems, what is the money, what are the costs, if a poster is needed, it has to be decided what kind of poster has to be <...> The time for this is scattered over many different activities and therefore the project manager is not even sure when to write the article, because he seems to get bogged down in all these different things (E3)“.

E7 also emphasises the importance of ability to prioritise and balance the various tasks. When asked “What advice would you give to a first-time manager“, one of the E7 advices was “Don't get involved in too many activities. Not just the project. Then you can't handle it. Teaching work, project, conferences, another project. Then it gets very overwhelming“. E2 express that the most exhausting part of project management is “probably preparing for all the official events, workshops, meetings. The manager of course he doesn't prepare everything, but he has to review everything, check all the points to ensure attendance. To make, to convince, it doesn't matter how far you have to come, that you are needed here and you have to be here”.

Another aspect of self-reflection and self-management competence is identifying and reflecting on personal motivations. Most of the experts were highly motivated to manage the project. The reasons were: “I think that team feeling, that there is a team, is one of the best

things. Then those indicators when you publish an article. But when we work together, when we think about what to do next, you think that there will be that continuity (E3)”; “I’m interested, it’s cool, you learn something, you make some contacts. I don’t know, I like to do that research. I like that (E7)”; “I create [the job – the note of the author] the one I find interesting, the one I want (E1)”; “In general, I am pleased with the projects. Good to have, interesting <...> You get involved in a network of people, a professional network, you don’t feel isolated (E5)”; “First of all, come up with an idea that you like. You have to like the idea. Because I don’t like to do things I don’t want to do. Of course, I joke that what I don’t want to do, when you have to do it, you take it and do it. If I initiate something [project – the note of the author] myself, I want to do something really positive. We joke that when we have an idea, it’s to change the world (E4)”.

When asked what training and seminars could benefit project managers, E3 said, “General competences training on managing stress and emergencies. Let’s say an article keeps getting rejected and rejected. How to keep the whole team from getting stuck, to try, to do, to support team members”.

### **3.2.2. Personal communication competence element**

The competence element Personal communication deals with the exchange of proper information, delivered accurately and consistently to communicate efficiently and effectively in different situations to different audiences and cultures. In the interviews, experts mentioned that they use different communication methods, channels and styles. The interview with E3 revealed that much attention is given to communication while listening to the team members: “You need to listen to what they [the partners from other institutions – the note of the author] say, to inform them in time, to remind them in time—observing how people. You know that one promises but doesn’t deliver. To send messages to the other one through a signal. Maybe you could do that. You adapt to people. It’s not just project management; it’s managing the whole team; emphasis needs to be put together, kept in mind“. Communication is improved by rethinking the most efficient ways to provide information: “I think it’s bad if communication comes from several points. It was a good decision that I sent a lot of things myself. On the communication, or on the scientific part <...> We experimented at the beginning through one person; what about communication through another, but it seems that it is best to have one person doing it. I do invitations and reminders. The information seems to get lost. I sometimes say to partners, please don’t ignore my emails. Then and then I send them. I alert and send”



(E3). According to the interviews with experts, the promotion of open communication is beneficial to projects. E3 remembers how the idea of one team member was implemented: “The way we talk, we make sure everyone knows what's going on. All partners, all participants, whether PI [principal investigator – the note of author] or any member, whether PhD student, postdoc, junior scientist, it doesn't matter. Everybody needs to know what is going on. As I understand it, they like it very much. Because this was said by one of the postdocs”. Project managers also select appropriate communication channels to reach the team members. E4 says, “This works for some, that for others. For some, it's by apps; for others, it's e-mails and Teams. For others, English is difficult, and you look for intermediaries to work with. Depends on the case. <...> You work with them as they are, and you use different tools. I'm fed up with Viber. The Swiss, in general, use only very secure means. Until I join them. You wander around like in the forest”.

Communication forms are various – virtual meetings, face-to-face meetings, and e-mails. The project manager needs to know which to engage and when. The other factor that should be considered and mentioned by the experts is the intensity of the communication, which should also depend on personal or even cultural aspects and features.

“Let's talk about document deliveries, deadlines, the Norwegians are totally relaxed, indicators, impact factor. In the first year, we have somehow explained what the impact factor is and that it has to be observed. The Scandinavian system has a different system for evaluating journals and researchers' activities respectively. Ours is different. They don't hear, let's say you have repeatedly to explain. In some places, the highlights need to be known” (E3).

According to E2, “Well, you see, national peculiarities of work. Everybody gets along nicely, but the Greeks, for example, are more relaxed. Aha, we got the project, cheers, well, with the work, okay, we'll have time, we'll do it <...> not because they are not competent, but they need to be contacted more often, the managers need to see them”. Project managers should have “the ability to communicate orally and in writing, constructiveness in communication, which makes it impossible for an international team to get together frequently for a live conversation; emails should be not too long, focused, and to the point, with reminders” (E3).

### **3.2.3. Relationships and engagement competence element**

Initiating and developing personal relationships helps establish contact with others and build the foundation for collaboration, commitment, and final performance (IPMA ICB). According to IPMA ICB, time and attention must be invested in establishing durable and robust

relations with individuals. Having personal relationships makes engaging the team in visions, goals and tasks easier.

The experts expressed their input while initiating and developing personal and professional relationships, demonstrating empathy through listening and support as important project management aspects. E3 shows genuine interest and involvement with others and their well-being in teamwork: “Ability, whether it's empathy or watching how the team is doing. You watch, sometimes a colleague joins in [online meeting – the note of the author], you see that he's not in the mood, you have a chat. I think it adds warmth and trust to the team. The informal side <...> I think the most important thing is a good atmosphere <...> we don't just talk about the work, we don't just talk about the language of the project, we don't just talk about the work of the project, we talk about the person. Someone has fallen ill, someone has nuances in the family, challenges at work, or changes in the institution. We talk about that. All that kind of stuff <...> how's it going, child in school, how's the child doing, how's the family adapting”.

E7 refers to relationships strengthening in various projects with other project managers: “In one project we had amazing coordinators. They made an effort, they would bring some lovely things. During the joint meetings you have to control the time, there is a coffee break which may never end because there are always things to do. Where it is difficult to control, they used to collect it with a wind chime. At the last meeting, they gave each of the participants small wind chimes. Then they sewed on some lavender to put on their eyes. Always attentive to where the activities are, what we are going to do, so that everybody participates and has a voice. It was really an effort. You can say it goes without saying, but it was an effort, but it was deliberate. We were looking at how we could make people happy. There was nothing like that in the other project. One is so masculine, the other feminine, even in terms of the number of participants. Meetings, after meeting for dinner, then we'd go for a drink, not a drink, talk in the pub. Good morning, we're already friends and girlfriends here. People have made those contacts”.

E7 also remembers how they planned the meetings to foster the relationships – “And in the smaller one, because there were three of us, we planned meetings for the human contact, and I knew that the Swede had a 5-year-old daughter, so I carried colouring books. I said don't think I'm crazy, but it's a nice book for me, to take the stress away. She said we will do it with ‘The name of the girl’. When they came to Vilnius University, I bought a toy. The girl was happy, she sent me pictures” (E7).

E6 believes that relationship creation should be started even before the implementation of the project in the proposal preparation phase. “The essential thing when preparing an

application is to meet more than once, online, preferably physically, for a coffee more than once to get to know each other. Talk not only about the project activities but also about life. Because this is the team you will be doing activities with for at least two years, maybe even longer. You can't go, practice shows that consortia that are in shambles don't work. They don't achieve the results that they could achieve <...> Warm conversation, meetings, human relationship [may motivate a team – the note of the author]”.

E1 considers that having warm and not only formal relationships is meaningful because it helps in difficult situations, and those are part of the project implementation:

“It's kind of not quite formal, doing something that motivates everybody professionally while introducing a little bit of another format. So that you really get to know the person, so you can trust, and there is a relationship where you can be yourself, even if you show your unpleasant side. To be forgiven. To get to know a person in such a way that there is room to tolerate their more unpleasant qualities. Because working so much creates all kinds of difficult situations”.

Developing relationships may become a foundation for future collaborations:

“I laughed. The Swede says there is so little money from Erasmus [Erasmus+ is the EU's programme to support education, training, youth and sport in Europe – the note of the author], I have to find a second bit of money to keep people working. I said, well, don't participate. You have a lot of projects. Oh no, I'd rather pay, but let's be together with the whole company. We share, we feel that one comes first, and we feel that we are doing something valuable for the teachers, students, and product. Inner joy is essential“ (E4).

#### **3.2.4. Leadership competence element**

According to IPMA ICB, leadership provides direction and guidance to individuals and groups to enhance individual and team performance, “it involves the ability to choose and apply appropriate styles of management in different situations. Besides displaying leadership with their team, the individual must be seen as a leader in representing the project to senior management and other interested parties”.

Initiating action and proactively offering help and advice is one of the competence indicators mentioned in the interviews with experts:

“A leader has to know the idea quite well and help everybody, and again, you can't have everybody going all over the place. As I mentioned in one project, when you go sideways because there is no backbone and you don't know what you are working on <...> You [project

manager – the note of the author] have to have someone to help, to jump on where needed, someone to demand. A leader must have the big picture” (E4).

E6 admits that leadership is a very important skill, but in general, project managers of the scientific field lack it: “Showing initiative. The more visible and active you are, the better, and as a country we are sorely lacking these skills. Leadership is very lacking. Perhaps it is fear, overload, or overload. There is a lack of leadership and a lack of those skills”.

Taking ownership and showing commitment competence indicators were heard in expert interviews. Project managers mentioned that they are always ready to retake and do the job if team members for some reason don't do their tasks:

“We have something, the worst case, our team [the team of coordinator – the note of the author] has been saying from the beginning, the worst case, if they scatter during the execution if they [the team of project partners (other institution) – the note of the author] don't work out, there's not much that will happen, we've planned it in such a way so that if we end things alone, we'll be able to consolidate those indicators (E3)”.

A similar commitment is demonstrated by E4:

“I take on tasks where the worst-case scenario would have been done by me. At least I'll trust myself to do it. With the Estonians, it was. They are great people; I know they can do it. But they never found the time. Then I said I would write your module, and then [they told – the note of the author] oh no, no. I know I'm not very good at it, but I'll write it enough for the report. Finally, they wrote it themselves”.

### **3.2.5. Teamwork competence element**

Teamwork brings people together for a common goal (IPMA ICB). Forming, supporting and leading the team with the help of communication and relationship creation is one of the project management duties. The competence element of teamwork is closely related to the competence element of relationship engagement and leadership. As it was analysed previously, the data won't be repeated. In the context of international research projects, teams are not only multi-disciplinary but also multi-institutional and multi-cultural.

Several institutions build the consortium with a principal investigator in each institution. The principal investigator is responsible for selecting the right team members in their institution. The coordinator usually may decide which institutions should be asked to join the consortium. E4 shares her experience: “When you first take the project management role, you should have at least a few partners [the partner institutions – the note of the author] who

are close to your heart, who are with you. It will be hard to manage. Who is on board with your idea, who is really on board, who is supportive, who will be able to advice you. Not only from your team alone, but also from abroad and from partners. The most important thing <...> Within six months, you get used to the project community. It's excellent that I have 2-3-4 old [participants from previous projects – note of the author]. Those who already know the culture, and it's easier for everyone else”.

The practice of asking to join the consortium of previous partners was mentioned by other experts also. For several experts, a successful project was defined as one which doesn't go apart after the project and has the will to collaborate on other projects later:

“A successful project is when the consortium does not leave after the project is finished. We've had some successful ones. Where we got involved we got involved in another project. When I started working on group projects. The first time we were invited, the manager needed to be visible in his field. They invited us to projects. The first time I went to the meetings, I saw that there were no random people in the consortium (E2)”.

The joint activities in professional and personal fields are mentioned as the feature of a successful project by E3: “And after the project is over, the team works together, collegial relationships, other projects, you keep in touch with those team members. You go and visit them during the holidays, you drop in on the way. Maybe we meet for coffee”.

E7 as one of three aspects of a prerequisite for successful project implementation names “the sociality” and “if contact is made, it makes it much easier”. The project manager also needs to ensure the involvement of every team member according to their abilities, the field of knowledge and the requirements of the project:

“The other [key competence of research project manager – the note of the author] is how can you get a team of partners to work efficiently so that there are no partners who are free riders <...> think about who you could bring in, what kind of team. If you work here and now you have your colleagues to work with <...> Within the framework of the project, think about who to work with. Put yourself in the structure of that project. So that people have the competences to participate. Know that you are useful in some way. Because you can't do it alone”.

The team members are usually known in the application stage, and it is the time for a project manager to consider the most appropriate people for the project:

“It is at the application stage that the team is already forming. There are very few types of projects where you are appointed as a manager, and from then on, you can do whatever you want to do. Most of the calls for projects are ones where you are already needed at the time of

application preparation <...> [the team is selected – the note of the author] by subject matter, by ability. Except for PhD students, PhD students, if you're not a supervisor yourself, you get either a white horse or a black horse. It's offered by another supervisor. Research needs to be done, you don't do research like that here like colleagues in another institution do, PhD students do research that you don't know. There is a risk, you are still asking the main researchers who you know (E2)”.

E3 also states that the prerequisite of the project team is collaboration before project implementation: “First of all, nobody was born from the zero, but the core of the team, which is from the VU side, has matured. Within 5 years, we had sort of started a relationship with “researchers from some field of science”. We knew each other, then a colleague and an Estonian made contact at a conference. In fact, the Estonians invited us, we showed that we existed”.

“When you get involved in a project you think this person is more interested in this, this person has these skills. And you can call this person in the middle of the night if you need to deliver a project”, - tells about selecting members of the team E6.

When asked what the advice E6 would give to first-time manager, the response was – “try to form a good reliable team and plan clearly, have a clear understanding with the whole team“.

### **3.3. The competence area Practice**

The third competence area, Practice, deals with thirteen project competence elements: Project design, Requirements and objectives, Scope, Time, Organisation and information, Quality, Finance, Resources, Procurement, Plan and control, Risk and opportunities, Stakeholder, Change and transformation. The Project design, according to IPMA ICB, is a “charcoal sketch” with high-level choices for the project. Requirements and objectives include the various demands and expectations regarding the outcomes and the objective, and how these are prioritised. Scope describes the specific boundaries of the project. Time deals with order and planning of the delivery. Organisation and information focuses on the organisation of the project and its internal information and communication flows. Quality is about the demands and organisation of both process and product quality. Projects are reliant on people, materials and money. For that reason, the Finance competence element and resources competence element are included. The procurement competence element goes with the need to require resources. The competence element Plan and control deals with integration and control of all

activities. According to IMPA ICB, an individual has to identify, prioritise and mitigate the risks and opportunities that deal with the Risk and opportunity competence element. The engagement with stakeholders is presented in the competence element Stakeholders. The last Change and transformation competence element deals with changes in the organisation.

IPMA ICB states that a person working in project management must consider all contextual influences and demands when the project is initiated. Still, this study aims to track the most critical research and study project management competencies. According to interviews with experts, for competence area Practice, they are Requirements and objectives, Scope, Time, Organisation and information, Quality, Plan and control.

### **3.3.1. Requirements and objectives, Scope, Time competence elements**

The project is undertaken because of internal or external stakeholders' needs. According to the IMP ICB, the competence element Requirements and objectives describe the 'why' of the project – which goals are to be achieved, benefits to be realised, and objectives to be reached according to the stakeholders' requirements. This competence element enables the individual to establish the relationship between what stakeholders want to achieve and what the project will accomplish (IMPA ICB).

Scope defines the specific focus or the content of the project. It describes the outputs, outcomes and benefits and the work required to produce them (IMPA ICB). The scope covers the definition of the project deliverables, the scope-defining structure like work breakdown structure, and the description of work packages. Competence element Time includes the identification and structuring of all components of a project in time to optimise the execution.

Competence elements Requirements and objectives, Scope and Time are the prerequisites to becoming a project manager as research and study projects are evaluated by funding authorities, and only those who win the competition get funding. The one who writes the application must be competent to establish the relationship between what the stakeholder (granting authority) wants to achieve and what the project will accomplish. This relationship needs to be written in the application to get funding. The scope defines the specific focus or content of the project, describing outputs, outcomes and benefits. The application must determine the project deliverables, work breakdown structure, and work packages. The description of the work performed, work objectives, cost and duration are presented in the proposal—all components of a project need to be structured in time. As the competition is very high, not all proposals are funded. According to statistics, provided by the EU to register to

their internal information system Qlink, the average success rate of FP7, Horizon2020 and Horizon Europe proposals is 14.37% and the average success rate of participants from Lithuania is 16.81%:

Table 7

The average success rate of proposals for FP7, Horizon2020 and HorizonEurope

Summary				
Top applying countries - regions				
Country Name	Eligible Proposals	Retained Proposals	Eligible EU Contribution (EUR)	Success Rate Proposals
<b>Total</b>	<b>478 313</b>	<b>68 741</b>	<b>840 534 959 153 €</b>	<b>14,37%</b>
Slovenia	14 006	2 070	6 493 585 096 €	14,78%
United States	16 086	3 307	2 317 156 007 €	20,56%
Cyprus	9 529	1 433	4 455 028 010 €	15,04%
Bulgaria	9 799	1 366	3 620 747 604 €	13,94%
Estonia	8 339	1 403	3 907 163 311 €	16,82%
Croatia	6 691	1 031	2 621 277 781 €	15,41%
Slovakia	6 557	1 054	2 879 029 229 €	16,07%
Lithuania	6 144	1 033	2 146 682 532 €	16,81%
Serbia	5 826	814	2 230 070 063 €	13,97%
Latvia	4 768	813	1 897 261 308 €	17,05%
China	3 303	715	339 684 510 €	21,65%
Luxembourg	5 088	900	2 399 392 246 €	17,69%
Ukraine	3 964	535	1 293 187 887 €	13,50%
Canada	3 653	757	346 985 359 €	20,72%
Russia	2 724	579	476 705 883 €	21,26%
Iceland	2 682	582	1 611 441 395 €	21,70%
Australia	3 146	674	269 487 722 €	21,42%
Brazil	2 341	508	337 778 901 €	21,70%

Source: The data from the EC Dashboard

On average, only one and a half eligible proposals are funded from the ten if we refer to previous statistics. E8 reveals, “Well, that's the thing, sometimes the tension is high in the competition itself. The competition, the application you submit, you have to please every fund; every fund has its style, its primary style, some have directions, and everyone has something more substantial. And these things are different. You have to hit that style. It's not a small job; you work, you wait, it's good when you get it. There is a lot of tension“. So researchers improve their applications, analyse the reasons why the application wasn't granted, search for other financing opportunities and apply repeatedly: “When we applied with the first time, we didn't get through [were not granted – the note of the author] because it's competitive, plus it's only



the first call. There were other challenges <...> The idea was to use what was already there as much as possible, but then it took a month or so of pure writing as a team. We had a few meetings <...> when everybody had already agreed, then very intensive writing“ (E3). E1 remembers that one application was submitted three times before getting funding: “We decided that another scheme should be taken <...> and we passed it on the third try“.

E8 states, “Writing proposals and looking for projects is a constant headache for researchers. It's inside you all the time. Submitting your ideas and selling them, and then writing reports“.

Usually, preparation of an application takes from half a year to one month, and lately, the consortium works remotely: “Lately, it's mostly by distance. A few months before the deadline, that's how they start. The last one where it was, it was also a live meeting, a distance, meeting. I didn't go, I couldn't. One was alive, but it started with the remote“ (E5).

E2 shares his experience, that communication during the application preparation stage is more intensive compared with the project implementation period: „During the preparation, this is the peak of the preparation. I had a statistic somewhere that during the preparation of one of the project groups, 800 e-mails were written back and forth“.

According to E4, the time to prepare an application may be different: „It depends. You never give all your time to a project. It's good if you have about six months because everybody is busy, they have lectures. If it's too long, then you don't know either. Between 3 months and half a year. You need others to help, teamwork“. When asked, “What advice would you give to a person who has become an international project manager for the first time?” E2 answered: “If you have already received funding, no advice is needed. He can already give advice [E2 laughs while saying “he can already give advice” – the note of the author].”

Referring to Vilnius University practice, the project manager is officially appointed after the proposal is funded. For that reason, this study does not adequately analyse competence elements, such as Requirements and objectives, Scope, and Time. Still, it may be seen that those competence elements are crucial and could be the object of future research, as the ability to master those competencies may determine whether the proposal will be funded.

### **3.3.2. Organisation and information competence element**

The project is a temporary organisation, and the competence element Organisation and information means the definition, implementation and management of this temporary organisation (IPMA ICB). According to IPMA ICB, this competence element consists of the

descriptions of required roles and responsibilities, effective information exchange for the temporary organisations, creation and storage of documentation, reporting structures and the project's internal communicational flows. The organisation and information competence include human resources, responsibilities, and communication processes.

According to the internal Vilnius University rules, the required roles, functions and responsibilities of each project's team member, including project managers, are defined in the order approved by the institution's official representative. During interviews with experts, no one of them mentioned this order. There may be several reasons for that, but one of them is supposed to be that the order defines the functions and responsibilities only of Vilnius University's employees, implementing the project without considering other partner institutions. As the interviews were about the management of international projects, project managers shared their experience from a broader perspective.

According to the analysis of interviews with experts, this competence element is crucial when the institution is the coordinator: "The coordinator sets the tone. He is the one who communicates what will happen, how it will happen, when the result is expected, prepares all the partners in the consortium for the preparation, for the waiting" (E5).

E4 says, "First, I like to set a clear structure. With all partners. And to be very clear in the documentation, to try to be not the maximum, but the basics. Because everything else after that is the coordinator's ability to put it on. If you demand too much from the partners, they will get lost. Don't start with small details. If you start demanding how to fill in this form. Sometimes I am asked to start with the form [when I am not the coordinator – the note of the author]. I'm sorry, I can fill in the form at the very last moment, the most important thing is to do the work, and then the form is there. We'll advise you, we'll put it on. It's important to agree what the work is, what the reports are, the core. Then we polish what is needed formally".

E5 shares experience being the project manager of the partner (not coordinator) institution when coordinators have different types of organisation in the project:

"E5. Different models of management, one centralised very clearly, and the EC likes it very much. Almost always gets [funding- the note of the author]. Writes it down precisely, and anticipates immediately how things are going to work. The other one is more decentralised, and the material is different.

R. Which do you prefer?

E5. There are advantages to both. In the decentralised one, you have more initiative; here, you can see more of what the coordinator wants. The coordinator takes the lead and manages at a detailed level. She knows what she wants. There are no uncertainties between tasks. Quickly

controls. The result may be that it will be better in the centralised one. Overall project result. Deliverable”.

E7 telling about the organisation structure puts it in the time frame – gant chart: “There are still grants for when a task starts, when it finishes, how many months, how long you work. There are timetables, there is a hierarchy, who is responsible for which groups, you know the deadlines. At the beginning of the project it is discussed who gets involved when, when deliverables are ready, it is agreed when they have to be ready. Some time before delivery. Usually, they are put up somewhere and who has to comment within how much time to comment. How much time to review and submit. We had a smaller one [project- the note of the author], we managed ourselves these are also interim [reports – the note of the author] in the Agency [the granting authority – note of the author] settlement”.

As there are many documents, they need to be structured and shared conveniently. E4 says: “We have to put it in a shared space; I look at that. Seeing how it is. We prepare a lot of material. In the last project, we prepared. We were ten partners; each partner prepared hundred pages of material and each one translated into their own languages”.

According to the E3, not only the structure of project management but also the peculiarities of participating partners should be put in place: “accents need to be put together, kept in mind. Let's talk about document deliveries, deadlines, the Norwegians are totally relaxed <...> In some places you have to put the accents together, you have to bear in mind [the difference for requirements in different countries – the note of the author]” (E3).

In an international project, the project manager needs to know how to establish communication processes between all participating institutions, not only inside the internal team. That is why he/she needs to be aware of IT systems used within other organisations and to find the most efficient way to document sharing and communicate with all parties. E3 tells her practice:

“Another thing we use for meeting minutes is we use google ShareDrive. There are files created for all the hangouts and meetings. That's where the information is stored.

R. Who does meeting minutes?

E3. If I do not it I ask someone else to do it. I also outline at the same time, and then when the meeting is over, I add to it in a few days so that I don't miss anything. If someone else is doing it, I sometimes write. Then I see if the meeting is up to the minute. I also give a link to remind them that there is a meeting minute <...> It becomes stuck if you say write everywhere. We use the share platform. Articles on the platform. If you say we write, everybody will say so what

part do I write. The main authors of that article anywhere you write, and the others say which part do I write. What should I do? Different contexts”.

E5 presents the situations when partner institutions can not share the same IT tools because of external limitations: “The project has a shared folder in the Teams platform. We lead the task we have to do, uploaded by one colleague who is responsible. With another project, partners are from India and Africa, and not for all the shared point is suitable, it is happening here. A project manager is very purposive, she can follow the subtasks of all the work packages herself. There is correspondence with her” (E5).

The experts mentioned that it is not enough to create a place to put documents, somebody has to take care that the system is used and documents are uploaded on time.

E4 says: “I had to push more to look because they would forget.

R. Do you do it yourself or do you ask someone to help you?

E4. There are administrators in the faculty <...>. In the faculty, they help. But they [the team members of the project – the note of the author] don't always listen. They drop letters somewhere. Besides I watch the most important points that come up. And the smaller ones are well looked after by the administrator. I want to pay more attention to the substance. I care about results”.

The experience of not having documents on time tells E1: “The information should be gathered for me by both the manager and the WP leader; I should get it. The manager should collect it. I should already have it. And what was. I go to every folder where in theory there should be information because we asked for it but nobody sent it or we didn't ask for it. And there's nothing there”.

Project managers are likely to ask for team help (project administrators, WP leaders) to monitor the delivery of documents timely. At the same time, they admit that the project manager has more authority over other team members and there may be delays if this responsibility is delegated to the project administrator.

All experts shared their experience with establishing communication processes for internal information to communicate and how. Above the previously mentioned IT systems for document sharing, different types of meetings were mentioned (steering comity, workshops, online meetings, face-to-face meetings, seminars). Project managers are likely to choose different numbers and types of information flow depending on the project scope and the number of partners. E3 explained that the project she is the manager of has many partners and that to control the team, more meetings should be held:

“We have live meetings, as others say, quite often two times now, even three times a year. It also works very well. I wrote in the report that there are planned meetings in the long term, that we need a big meeting. Others work very well; we see in the work package we need a live meeting to simulate when someone is available and short-term planning. As I understand planning as we are preparing an application, we have to mark when the meeting is going to be, but some of them are very good to plan, but also with risk, it is almost impossible to plan exactly, it is very good when a working group, not necessarily the whole team, says it is necessary and then we do it. Then it's good to stimulate, to activate. Online doesn't match that communication; when you meet live, you discuss everything you don't say online.

R. Do you also have an online meeting?

E3. Yes, regularly, every two weeks <...> The idea is that basically, all the online meetings have at least one partner representative <...> That's why the need for that steering committee, as I've understood other projects to be happy about - went from all countries to Trakai in the summer. What is there to be happy about? We have steering committee meetings online when we need them to vote so that I have proof that they have approved, all that”.

According to E6, the communication flow is the prerequisite of quality assurance in the project: “In my example, the price of that quality is the pressure of a very high level of preparation, of a high level of communication, I am afraid to use that word [pressure – the note of the author]. Communication pressure because you have to communicate that there is a deadline, meetings, monitoring, and controlling. In principle, it is my experience that every month, then increase, to maintain an unmediated relationship. In my project I have in my team [five departments participating in the project are listed by the expert – note of the author]. Lots of people from different departments, different divisions. I have to remind them. Clearly communicate deadlines, content, and who to push through whom. To know your team and their capabilities. A person is not equal to a person. One can do it quickly, another can do it very well, but needs more time”.

E1 tells about the communication structure in the internal project team, joint communication events also internal communication means in other partner institutions: We have a steering committee. I know that at the “Title of University”, they meet once a month. There is a meeting of their group. And we meet once a month. But we meet there, I don't organize it, there's a research colloquium. Because in our schedule, with the number of hours of teaching that we have, there's not an hour a day that we can all meet. In other universities, there are no lectures at lunchtime. Lunchtime is when there are no lectures. At lunchtime, there are these seminars. Sandwiches are provided to eat participate, and exchange information. This

is the case in “Title of University”, at least in that “Title of the Department at the University”, there is a time when the whole centre comes. There is a research seminar. There is once a month, not a project. They communicate internally like that, and together through the Steering Committee meeting, usually once every six months, they coincide with the events in the summer school or the midterm research workshop, in the big events like that. We meet and discuss what needs to be discussed. We also meet often because something is going on beyond this. We meet online and live <...> It's to keep the pulse. Every Monday, all day Monday, I dedicate to the project. I estimate X% of my salary is from this project. And we're meeting with [mentions the name of the project team – the note of the author]. “The name of the project team member” has to be watched every month to keep a pulse on Deliverables. If there is one at the end of the month, she says at the beginning”.

Different levels of communication are presented by E5. One is the internal communication at the institutional level of the internal project team, and the other is the communication with the project coordinator and other project partner institutions: “Tomorrow is the project meeting. It does plenary once every two months and once every month in your region. Europe, International, and some others. Remote meeting. Plus, work packages. Since we have to lead, we did a meeting with our work package last week; we had to include them because we had to prepare a questionnaire. We are leading about ten partners <...> We have a small team; we try to divide up the tasks, and we meet every Friday. There we sort out who is going to participate. A lot of meetings are online. The two projects are more spread out, one to the other. We try to have face-to-face meetings once a week. We discussed who was going to be at the meeting, what work we had to do, and what we were going to do. Somehow, it's good when it's regular”.

### **3.3.3. Quality competence element**

According to IMPA ICB, project quality should be addressed in two ways. One is the assurance of the quality of the process and how the project is organized. The second driver is managing, assuring and controlling the quality of the output and outcome of the project.

The analysis of interviews with experts shows that assurance of quality is a highly important competence of project managers. They constantly review the project deliverables and ensure quality goals are achieved.

When asked, “As a project manager, what should you do?”, the answer from E2 was:

“Well, to look at the scientific side. One group with several groups makes, coordinates a programme of research, does the research and gets the output. Article. The manager needs to make sure that the article doesn't go to the local press but to journals where it has an impact factor <...> A scientific project manager must be visible in science, must be. My whole life is an academic life, there are articles, not so much the number, but the number of citations, how much they are recorded, the so-called H index. Again, it is not a single correct parameter because, in different fields, the citations are different. But it has to be visible in its field”.

According to E2, it is not enough for the project manager to be from a similar field of science that project outputs cope with. He or she should be from the specific science field to know best the content and be able to evaluate the quality of project results. When asked, “How do you think a non-scientist could manage a project?” E2 answered confidently: “From another field? I think not. You can't be a coach without understanding the game without playing basketball. An administrator, yes, can be more or less up to the same thing, but a manager has to be a specialist in at least one field.

R. Why do you think that?

E2. He will be able to evaluate the results.

R. To ensure quality?

E2. Yes, yes exactly quality. Imagine that in related fields, for organics, I would take my data to another department. They wouldn't be able to say whether it was good or not. There are a lot of those fields. Everybody works in a narrow field, but they want to ensure quality”.

E5 says that the most important competence of the project manager is the understanding the content created in the project: “Most importantly, the core competency of content. Knowing what is important, why you are doing the project, why it is important and what the results should be <...> Two necessary competencies, there may be a different balance - to know your field, but if you don't have a network, a network, you won't make a consortium. Sometimes there is a coordinator who has a very good network and knows how to bring people together. It's best when those things are balanced when you know your field. There is a lot of competition. The balance of these. It's bad if it's just a network, then you get a very networking approach, which may not result in a clear outcome in terms of publications and recommendations if they come from the project. If I had to choose, I would say a higher proportion of subject matter expertise”.

E1 also is confident that the manager of research project should be the scientist. The reasons for that are not only being able to track the quality of the project but also to know the broader field of research, and the need of the EU policy in order to have the ability to write

new proposals: “You need to understand the field of research, what's going on in it. You need to know what the field of “specific field of research” is. That field of research comes from America and Britain. In my case, it comes from European and French studies. You have to understand the research field, where it came from, how it was formed and where it is going now. You need to understand very well where the EU's research priorities are because the EU is the funder, and what problems the EU as a unit is addressing. That needs to be very well understood. And to understand how your field of research can contribute to solving those problems. And then you talk to your partners and you talk about what is happening in your country, you read their work. We read each other's publications, we talk to each other in the language of science. We talk about it and we think about what problem we are going to solve now. What theories are we going to use, what are good theories, what are not good theories, what is relevant, what is not relevant?” E8 states the same opinion: “They [not scientists – the note of the author] would not be able to manage the scientific part. Evaluate the results, deciding to give up some part of the research. Administration part to lead it could. But if there is a larger consortium, if there is communication between them to clarify among themselves. But it is hard to imagine. Need scientific competencies to understand. And I would not be able to manage Y field with X field's competences”.

E6, as E1, E2, E8 and E5 think that the scientist should be the manager of the project for that reason that the main aim of the project is to create qualitative outputs and outcomes: “A research project should be managed by a scientist, but with a lot of right hands. The research part creates the essential part. It should be managed by a scientist. The technical side, the reporting, the communication, a lot of the technical administrative stuff has to be done by people who are professionals, who have the skills, professionals” (E6).

When asked if the manager of the research project could be not a researcher E3 at first answered yes, but later on while answering the question changed her opinion: “Probably, it probably could. But I don't know what it would look like when it comes to the subject matter, the writing of articles, the commenting, the discussions about how to do the work better, how to model it, and what to draw from the data. I don't know. And for a non-scientist, I suspect it's hard to imagine the whole scientist routine. It's easy to say you write this then that, the paper then don't forget this or that during that week. Easy to say. Only a managerial person I doubt understands a scientist. We feel in the university already that it comes from the management side. Apply for everything else, when we do that we run out of help. What from the subject side is all right, but it appears that there is a lack of help from the administrative side. If it's only the management person who writes, then the opposite will happen”.



When answering the question, “What do you think are the core competencies of a manager that are essential and important for the implementation of research projects?” E3 answered: “The knowledge of the subject area, I think it is necessary to have”.

E6 thinks that although the project manager should be the researcher, they should be supported by professional managers: “A scientist should manage a research project but with a lot of right hands. The research part is the essential part. A researcher should manage it. The technical side, the reporting, the communication, a lot of the technical, administrative stuff has to be done by professionals who have the skills, professionals”.

E4 and E7 were not so sure that the manager of the research project should be the researcher. E4 expressed her opinion that it depends on the kind of project: “Differently, if you address the scientific part, you have to bring together a nucleus of people who know the subject. There must be people who know. Otherwise, there will be a discussion about nothing. And you have to trust them. The second thing is that the leader has to know the idea quite well and help everybody, and again, you can't have everybody going sideways. As I mentioned in one project, when you go sideways because there is no backbone and you don't know what you are working on”. So even if there are highly competent researchers, the leader should be the one who shows direction, and this is possible only while having the researcher's competencies.

When the project is study, not research kind, there is the possibility of having the manager, not the researcher: “Again, it depends on the case of specific projects. Physics, lasers, I hear from others, scientific engineering, more to be trusted because they do research. Doing research has to be more in that field. Less scientific, on the general dissemination, educational side, more interdisciplinary. If it is in one field, deeper, for example, lasers, I have heard that a project brings together high-level scientists and they have to be knowledgeable in that field” (E4).

E7 had the position that the manager could be not the researcher, but with enough knowledge of content: “The more I think about it, the more I think that I am not a manager. Because I don't know many things. For example on open access. I found a person. If it was a manager, it would be easier. It would depend on the person. If it's just a box, then it would be bad. The content of course should be known. But that's what academic experts are there for, to see the quality inside”.

The research project manager or other team members review deliverables and their quality. The way to do it depends on the project. E5 shares his experience:

“Yes, where there is a centralised one, the coordinator checks [the quality of deliverables – the note of the author]; in the other one, there is a dedicated panel, and we share

the deliverables, and they send us the product to say whether it is good or not <...> In one project, the partner's review said the result was not very good. Then, the institution came up with the idea of bringing in external people to see if it was really wrong. The feedback was good, not so critical. There were some observations. Maybe what the scientific community never says bluntly what they think about the result. Then you make tools to check that there is not one institution”.

E5, E6 and E8 highlight the importance of the project manager to the quality of the project results. According to E6 “The coordinator's position is very important, the involvement of care everywhere, and we have a coordinator who is maybe even too responsible. Every activity of every partner is checked, supervised, and controlled, maybe even too much at the beginning. They <...> are very quality-oriented, they have a lot of experience in the preparation and execution of projects. They exude a need for quality. They will not accept a low-quality product. They put their hand in and say, we will adjust, we will do it this way, you can feel their hand everywhere”. So the project manager with his/her institution’s team makes the effort to deliverables meet the quality requirements.

E5 express the opinion that the strong input of the project manager has a positive effect on the quality of deliverables while saying “The Coordinator provides leadership and direction at a more detailed level. She knows what she wants. There is no uncertainty between tasks. Quickly gets things under control. The result is likely to be better in a centralised one. Overall project result. Deliverable”.

E8 says, “Outstanding scientific results, patent applications, articles, full reporting, no administrative violations. I see it as secondary - compulsory and necessary, but that is what we are aiming for. Spending money and following a planned sequence is not interesting. It is interesting to write good articles and get good results”.

E3 mentions that “They [team members – the note of the author] help me but still I got the content part”.

It is also important to balance the needs to meet the requirements but not exceed them: “How much time, how much money? Balancing everything. You can't do a project for a few thousand that would cost a million on the market. It has to be reasonable. You can't ask people to spend 10 hours on a project, you can't ask people to spend 10 months on a product. No way. Must be within reason. Monitoring has to be balanced. Not in a formal, monitor this, monitor that. We are preparing minimum criteria. Yes, the products have to be made, they have to be quality. But we do not have to devote ourselves to high-level monitoring of how we do things. We have minimum criteria for quality, for what has to be” (E4).

### 3.3.4. Plan and control competence element

According to IMPA ICB, maintaining balance, consistency, and performance is essential to achieving project outcomes. For that reason, the competence element “Plan and control” is necessary as it enables a person to establish and maintain a “balanced and integrated view over the management of the project” (IMPA ICM). This competence element combines many other elements as all information comes together here, and decisions are prepared, taken, and reviewed. From the beginning of the project, a monitoring process should be in place for progress, finances, quality and reports issued.

The interviews with experts show that reporting is an integral part of the research and study project manager's responsibility and crucial competence, and usually, the report is done with the team: “If the document is payment request, in some sense the reports, is a matter for the manager with the administrator and the financial officer, when there is a change in who is changing, the manager and the administrator, involving whoever is changing with whom. We are looking together at what is relevant. Regarding the annual report, our local team has the biggest workload. Others are given tasks to fill in certain sections. As far as I have seen, very few people correct it if we write it. In the catalogue, everybody would look at it, add to it, and comment on it, and the steering committee would look at it and approve it. Everyone involved in the project sees the report in the catalogue. We take it upon ourselves to write most of it, but some of it is where the partners are and what was done. We say add, and we don't write enough. Please put it together. Because on platforms, you can assign tasks” (E3).

E6 says that reporting is a key competency for a research and study project manager: “Of course, it is another thing, in terms of reporting and academic writing, because there is a lot of paperwork. <...> The profile of the ideal international project manager is a super bureaucrat who knows very well the processes within his institution, plus he looks at other institutions, what the processes are, how things work, how much time he has if he has to write a report. How much time will it take, and how much is left to get feedback and finalise? It all comes down to the result, when you will do it and whether it will be quality”.

According to E2, from the beginning of the project, the project manager has to think about the report: “The manager has to imagine how it will all look in the report. During the implementation of the project, there was a need for such research, and the report needs more data. There may be some that are not included in publications because of quality or because they are not that important, but it is good to have them in the report. In the same way, when you start to do a research, you think about how you are going to present it in the paper. The result of every study can be written in two lines, but if you write it in two lines, that is what we

paid money for. You need to show all the way through, you need additional ones that have an indirect link.

R. How much time do you spend on the preparation of the reports to the funding authority?

E2. Well, a month really counts.

R. Intensive work?

E2. Yes, yes. The bigger the consortium, the more material you have; you have to go through lines and sections”.

One expert expressed her opinion confidently that the content is much more important than reporting. Although it is compulsory, it shouldn't go higher than the results of the project: “I say not first and foremost the content. <...> For me, it is important that everyone is happy. We look at the content. Although sometimes you don't get along with, say, formal assessments, you have to have a backbone. <...> And no, the content has to come first, what we want, what we see. Then we can see what we want. Add, but not the other way round <...> I don't like that facade very much. We have to balance. We have to be happy with our work and with what we are doing, not that we have to settle. It has to be okay, the requirements, but we have to feel that we are doing work that is useful for the project; we have to enjoy what we are doing. And the second place is to be accountable, but not the other way around, to think how to be accountable” (E4).

### **3.3.5. Time competence element**

The competence element Time refers to the ability to define, sequence, monitor and control components necessary to deliver the outcomes of the project in terms of time (IPMA ICB).

The activities that need to be carried out when determined in the application to get funds and later on become part of the grant agreement. All experts in the interview mentioned that they use some kind of scheduling method (timetable, Gantt chart). Although they said that it is part of their responsibility to monitor the deviations from the plan, some of the experts mentioned that depending on the work needed to be carried out, the schedule may not be very detailed. This is because doing research takes time which is not so easy to plan. E2 tells his experience in planning the defining time for tasks and controlling:

“E2. Wherever I'm participating, I always try to make the time scale overlap. It's not like a brick in science that there's one end here, the other end there; no, they have to overlap all the

time scales. It's a test of the strength of the project manager that even if the scales overlap, the work is still going on.

R. How does that strength have to be demonstrated?

E2. The manager has to be able to communicate with the group he has assembled.

R. How to communicate, do you think?

E2. Well, as little interference as possible, observation, but you don't have to write every day what you have done today. It doesn't happen that way. A month passes, [you ask – the note of the author] how you are doing. Is the result adequate for the time?

R. Give freedom, but to feel control too?

E2. That's exactly right; we all live today. I have lectures today, so I'm not going to do much in science then. But yes a month to see is already. So it's a bad idea to exert daily control. Katyca Russian scientist, and a Nobel Prize winner, told if you want to disrupt scientific work, introduce a strict coming and leaving schedule. And this works. The same with strict daily writing”.

E3 shares her opinion of the specificity of research project time management: “I've been involved in all kinds of projects and training. Like team building, communication, and attracting the attention of the audience <...> As far as we have noticed, the problem is that often the training is general. There is a tool, and we can follow it. We can make a WP timeline of the activities, and we can make a list of the tasks. It will send reminders. In theory, it's fine. When you have a researcher there, you can plan whatever you want. And that creativity won't come, if it was planned for next week. The creativity won't come, plus it might be that the researcher has gone on a secondment, and that plan is over. I don't know if any researchers strictly follow a plan. Because there is a supplement, it is not a core activity, and it is also creative. It is not like baking a cake. It is not like I stood up and baked it. The result is sometimes, maybe, psychological well-being and inspiration. You have to catch that moment. When you're lucky, you sit down. What we do as researchers is - if I sit down and it doesn't work, maybe I'm successful in collecting the data, maybe I'm successful in drawing a picture”.

E4 also shares her experience that the ability to control and monitor the progress of activities is a vital project manager competence which should be done regularly but not very frequently:

“E4. That main coordinator needs to keep the strings to a minimum so that everybody is doing it. If you stretch too much, like a student who is behind, when you have much catching up to do, all the motivation is gone. But when you're roughly at a normal level, then this helps people.

R. How do you keep track of deadlines?

E4. We make that plan; you divide it up, some every three months, but for me, three months. It goes by very quickly, better every six months. Of course, you make sure that the work is going on. We meet for discussions. Covid [COVID-19 – the note of the author] has given a good sign. They did not want to go online. Now it is good”.

When asked what needs to be done for the project to be successful, E7 answered: “to complete tasks on time and to a high quality. And the third is community. If you build up contacts, it makes it much easier”. E7 thinks that the project manager should be aware of the type of each team member to know which one should be more or less controlled: “It depends on the person. Some people need to be reminded, as I say, to hold it by the throat. To do that, because the other thing is the loads are heavy, of course, there is time management, there are discipline things, parents die, children get sick. I don't have that kind of clarity. The principle is that you agree on dates, but of course, it happens that you agree, and now suddenly you have to because somebody has forgotten something, and now you have to share. It happens all sorts of things. With European projects, there are strict deadlines to submit [reports and deliverables – the note of the author] to fill in the system, to see that it's done earlier and submitted”. E5 confirms that time tracking is always part of project management: “Deliverables must still be done on time. If it's not on time, they still send you reminder messages of some kind. Because meetings are going on, it's not like the deadline comes and asks you if you have the package or not. They [project manager or coordinator – the note of the author] will alert you and send you some reminders”.

## CONCLUSIONS AND RECOMMENDATIONS

1. Literature analysis shows that the most relevant project management competencies are required depending on the project type. Thus, such characteristics as “research and study project”, “international project”, “project funded by public authorities”, and “project implemented by the public body” predetermine the set of crucial competencies for project managers. As a project is defined as a unique endeavour to realise agreed deliverables, no supposition to find universality and fit to all of such kind project management competencies is carried on.

2. The academic environment has its own culture with the perception of project management and project management requirements for research and study projects. The need for extensive autonomy, unpredictability of research outcomes and research opportunities with the need to take risks, and a team of highly competent in the content area researchers on the one side compete with the obligation for strict project control, time and budget limits, predictability of project output and need to reduce risks to ensure the delivery of the results in time, scope and budget meeting quality requirements. Project management is considered less critical than having research itself, which is of much higher status. Because of the global changes, funding opportunities and funding bodies’ requirements, a shift in the perception of project management may be seen. The efforts from the top to put research and study projects into project management requirements were evaluated as an attempt to reduce the autonomy of the researcher or even destroy the research process itself. The funding authorities may be seen as the introducers of the project management concept and the need for project management competencies in the research field. At the same time, having the power with solid funding and not shifting their position towards requirements, they managed to change researchers’ perceptions towards project management into manageable.

3. Because of increasing public funding, requirements of funding authorities, and the need for universities to stay competitive in the global environment, project management started to be introduced as the scope of academic training. The research culture has a history of hundreds of years. Thus, it is vital to encounter its specificity while adapting project management competencies to research and study projects. The higher complexity and requirements should be considered when managing international research and study projects. In international projects, intercultural teams need more time and effort than monocultural crews to transfer that potential into actual productivity.

4. The competency of project management is a complex phenomenon examined by researchers. It is not enough to have “hard” skills to manage projects, and the knowledge of project management techniques, tools and methods is only one of the areas to know. “Soft” skills and “human aspects” of project management, like core personality characteristics, behaviours, attitudes, leadership style and self-concept of project managers, are also essential. To summarise, the literature on project management competence distinguishes three main areas of interest: context, project management tools and techniques and the human aspect. The relationship between competencies and project success is evitable. As literature analysis shows, there are a variety of project management competence theories and standards. IMPA ICB (for project management) was chosen as the model to analyse which project management competencies are most important in leading international research and study projects.

5. According to the interviews with experts, project managers should understand the comprehension and alignment of the organisation’s established structures, systems and processes that support the projects. This knowledge may be essential in deciding whether to become a research and study project manager. The research and study project management should also consider the Power and interest competence element. It helps to make decisions faster, motivate the team members and convince them or other stakeholders.

6. The competence area People handle the personal and social competencies of the person. The analysis of the experts’ interviews shows that five competencies out of ten in the competence area People may be presented as taken into consideration for international research and study projects manager. Those competencies are Self-reflection and self-management, Personal communication, Relationships and engagement, Leadership, and Teamwork. Self-reflection and self-management are vital as researchers are involved in many professional activities demanding clear priorities and strong motivation. In managing an international research project, information must be delivered accurately and consistently to communicate efficiently and effectively in different situations, audiences, and cultures (Personal communication competence element). The Relationships and engagement competence element is believed to be empowered from the beginning of the project (in the proposal preparation stage). Developing relationships may become a strong foundation for future collaborations. The leadership competence element becomes important when uniting the team and showing support and direction. Experts strongly emphasize taking ownership and showing commitment to project activities. The project manager should work to have a reliable team and reliable partners. The experts said that a project is successful if the team doesn’t go apart after the project ends and has the will to collaborate on other projects later.



7. Competence elements Requirements and objectives, Scope and Time are the prerequisites to becoming a project manager as research and study projects are evaluated by funding authorities, and only those who win the competition get funding. Therefore, those competence elements are essential for international project managers' competencies. Competence element Organisation and information are vital to international research and study project management as roles and responsibilities, effective information exchange, creation and storage of documentation, reporting structures and the project's internal communicational flows should be in place. The analysis of interviews with experts shows that assurance of quality is a crucial competence of project managers. They constantly review the project deliverables and ensure quality goals are achieved. Reporting is integral to the research and study project manager's responsibility and crucial competence. For that reason, the Plan and control competence element is in the competence list.

### **Recommendations**

1. For top management (head and heads of functional departments). To support the necessity of preparing the international project managers' competence model, provide resources and encourage researchers to develop their international project management competencies.

2. For organisation. The systematic approach should be adapted to maintain and develop international research and study project manager's competencies in the organisation. The model of core competencies should be introduced to the university community and project managers. The model could indicate the project management competence elements introduced in this empirical research, a short description of each element, tools for developing those competence elements and self-evaluation. Tools could be references to literature, articles and templates, and self-evaluation questionnaires.

3. For organisation. To define the strategy for international research and study projects' management competence development. The approach could be to evaluate the project management competencies of project managers and their need for specific support. The support could be provided in training, seminars, and mentoring. The topics should match the individual needs and organisation requirements set to international project management competencies. For example, the topics could be leadership, diplomacy, effective communication and cooperation in multicultural teams, IT tools for collaboration and documentation, the legal framework governing the management and administration of EU funds, and the preparation of proposals. Each type of activity should be evaluated and improvements introduced.

4. For organisation. To create a researcher mentorship network where less experienced international research and study project managers could get advice and support from more experienced colleagues. The peers for mentorship should be arranged according to the field of research and the type of funding program.

5. For organisation. Provide the project manager with information about project supporting functions and project management processes in the organisation before the project is funded (in the application stage) in the form of slides or electronic brochures. When the organisation is the coordinator, partner organisations could also provide the project manager with general information about their organisation's supporting functions and project management processes.

6. For international research and study project managers. As international research and study project management may be stressful, researchers usually engage in many activities requiring creativity and concentration, the mindfulness could be an effective self-development tool.

7. For international research and study project managers. To be open-minded and proactive, participate in the activities introduced by the organisation to develop international research and study project managers' competency.

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## ANNEXES

### Annex 1

IMPA ICB Competence areas, competence elements and key competence indicators

<p><b>1. Perspective</b></p>
<p><b>1.1 Strategy</b></p> <p>1.1.1 Align with organisational mission and vision;  1.1.2 Identify and exploit opportunities to influence organisational strategy;  1.1.3 Develop and ensure the ongoing validity of the business / organisational justification;  1.1.4 Determine, assess and review critical success factors;  1.1.5 Determine, assess and review key performance indicators.</p>
<p><b>1.2 Governance, structures and processes</b></p> <p>1.2.1 Know the principles of project management and the way they are implemented;  1.2.2 Know and apply the principles of programme management and the way they are implemented;  1.2.3 Know and apply the principles of portfolio management and the way they are implemented;  1.2.4 Align the project with project supporting function;  1.2.5 Align the project with the organisation's decision making and reporting structures and quality requirements;  1.2.6 Align the project with human resource processes and functions;  1.2.7 Align the project with finance and control processes and functions.</p>
<p><b>1.3 Compliance, standards and regulation</b></p> <p>1.3.1 Identify, and ensure that the project complies with all relevant legislation;  1.3.2 Identify, and ensure that the project complies with all relevant health, safety, security and environmental regulations (HSSE);  1.3.3 Identify, and ensure that the project complies with all relevant codes of conduct and professional regulation;  1.3.4 Identify, and ensure that the project complies with relevant sustainability principles and objectives;  1.3.5 Assess, use and develop professional standards and tools for the project;  1.3.6 Assess, benchmark and improve the organisational project management competence.</p>
<p><b>1.4 Power and interest</b></p> <p>1.4.1 Assess the personal ambitions and interests of others and the potential impact of these on the project;  1.4.2 Assess the informal influence of individuals and groups and its potential impact on the project;  1.4.3 Assess the personalities and working styles of others and employ them to the benefit of the project.</p>
<p><b>1.5 Culture and values</b></p>



<p>1.5.1 Assess the culture and values of the society and their implications for the project</p> <p>1.5.2 Align the project with the formal culture and corporate values of the organisation</p> <p>1.5.3 Assess the informal culture and values of the organisation and their implications for the project</p>
<p><b>2. People</b></p>
<p><b>2.1 Self-reflection and self-management</b></p> <p>2.1.1 Identify, and reflect on the ways in which own values and experiences affect the work;</p> <p>2.1.2 Build self-confidence on the basis of personal strengths and weaknesses;</p> <p>2.1.3 Identify, and reflect on, personal motivations to set personal goals and keep focus;</p> <p>2.1.4 Organise personal work depending on the situation and own resources;</p> <p>2.1.5 Take responsibility for personal learning and development.</p>
<p><b>2.2 Personal integrity and reliability</b></p> <p>2.2.1 Acknowledge and apply ethical values to all decisions and actions;</p> <p>2.2.2 Promote the sustainability of outputs and outcomes;</p> <p>2.2.3 Take responsibility for own decisions and actions;</p> <p>2.2.4 Act, take decisions and communication a consistent way;</p> <p>2.2.5 Complete tasks thoroughly in order to build confidence with others.</p>
<p><b>2.3 Personal communication</b></p> <p>2.3.1 Provide clear and structured information to others and verify their understanding;</p> <p>2.3.2 Facilitate and promote open communication;</p> <p>2.3.3 Choose communication styles and channels to meet the needs of the audience, situation and management level;</p> <p>2.3.4 Communicate effectively with virtual teams;</p> <p>2.3.5 Employ humour and sense of perspective when appropriate.</p>
<p><b>2.4 Relations and engagement</b></p> <p>2.4.1 Initiate and develop personal and professional relations;</p> <p>2.4.2 Build, facilitate and contribute to social networks;</p> <p>2.4.3 Demonstrate empathy through listening, understanding and support;</p> <p>2.4.4 Show confidence and respect by encouraging others to share their opinions or concerns;</p> <p>2.4.5 Share own vision and goals in order to gain the engagement and commitment of others.</p>
<p><b>2.5 Leadership</b></p> <p>2.5.1 Initiate actions and proactively offer help and advice;</p> <p>2.5.2 Take ownership and show commitment;</p> <p>2.5.3 Provide direction, coaching and mentoring to guide and improve the work of individuals and teams;</p> <p>2.5.4 Exert appropriate power and influence over others to achieve the goals;</p> <p>2.5.5 Make, enforce and review decisions.</p>
<p><b>2.6 Teamwork</b></p>

<p>2.6.1 Select and build the team;</p> <p>2.6.2 Promote cooperation and networking between team members;</p> <p>2.6.3 Support, facilitate and review the development of the team and its members</p> <p>2.6.4 Empower teams by delegating tasks and responsibilities.</p>
<p><b>2.7 Conflict and crisis</b></p> <p>2.7.1 Anticipate and possibly prevent conflicts and crises;</p> <p>2.7.2 Analyse the causes and consequences of conflicts and crises and select appropriate response(s);</p> <p>2.7.3 Mediate and resolve conflicts and crises and/or their impact;</p> <p>2.7.4 Identify and share learning from conflicts and crises in order to improve future practice.</p>
<p><b>2.8 Resourcefulness</b></p> <p>2.8.1 Stimulate and support an open and creative environment;</p> <p>2.8.2 Apply conceptual thinking to define situations and strategies;</p> <p>2.8.3 Apply analytic techniques to analysing situations, financial and organisational data and trends;</p> <p>2.8.4 Promote and apply creative techniques to find alternatives and solutions;</p> <p>2.8.5 Promote a holistic view of the project and its context to improve decision-making.</p>
<p><b>2.9 Negotiation</b></p> <p>2.9.1 Identify and analyse the interests of all parties involved in the negotiation;</p> <p>2.9.2 Develop and evaluate options and alternatives with the potential to meet the needs of all parties;</p> <p>2.9.3 Define a negotiation strategy in line with own objectives that is acceptable to all parties involved;</p> <p>2.9.4 Reach negotiated agreements with other parties that are in line with own objectives;</p> <p>2.9.5 Detect and exploit additional selling and acquisition possibilities.</p>
<p><b>2.10 Results orientation</b></p> <p>2.10.1 Evaluate all decisions and actions against their impact on project success and the objectives of the organisation;</p> <p>2.10.2 Balance needs and means to optimise outcomes and success;</p> <p>2.10.3 Create and maintain a healthy, safe and productive working environment;</p> <p>2.10.4 Promote and ‘sell’ the project, its processes and outcomes;</p> <p>2.10.5 Deliver results and get acceptance.</p>
<p><b>3. Practice</b></p>
<p><b>3.1 Project design</b></p> <p>3.1.1 Acknowledge, prioritise and review success criteria;</p> <p>3.1.2 Review, apply and exchange lessons learned from and with other projects;</p> <p>3.1.3 Determine complexity and its consequences for the approach;</p> <p>3.1.4 Select and review the overall project management approach;</p>

3.1.5 Design the project execution architecture.
<b>3.2 Requirements and objectives</b> 3.2.1 Define and develop the project goal hierarchy; 3.2.2 Identify and analyse the project stakeholder needs and requirements; 3.2.3 Prioritise and decide on requirements and acceptance criteria.
<b>3.3 Scope</b> 3.3.1 Define the project deliverables; 3.3.2 Structure the project scope; 3.3.3 Define the work packages of the project; 3.3.4 Establish and maintain scope configuration.
<b>3.4 Time</b> 3.4.1 Define the activities required to deliver the project; 3.4.2 Determine the work effort and duration of activities; 3.4.3 Decide on schedule and stage approach; 3.4.4 Sequence project activities and create a schedule; 3.4.5 Monitor progress against the schedule and make any necessary adjustments.
<b>3.5 Organisation and information</b> 3.5.1 Assess and determine the needs of stakeholders relating to information and documentation; 3.5.2 Define the structure, roles and responsibilities within the project; 3.5.3 Establish infrastructure, processes and systems for information flow; 3.5.4 Implement, monitor and maintain the organisation of the project.
<b>3.6 Quality</b> 3.6.1 Develop, monitor the implementation of, and revise a quality management plan for the project; 3.6.2 Review the project and its deliverables to ensure that they continue to meet the requirements of the quality management plan; 3.6.3 Verify the achievement of project quality objectives and recommend any necessary corrective and/or preventive actions; 3.6.4 Plan and organise the validation of project outcomes; 3.6.5 Ensure quality throughout the project.
<b>3.7 Finance</b> 3.7.1 Estimate project costs; 3.7.2 Establish the project budget; 3.7.3 Secure project funding; 3.7.4 Develop, establish and maintain a financial management and reporting system for the project; 3.7.5 Monitor project financials in order to identify and correct deviations from the project plan.
<b>3.8 Resources</b> 3.8.1 Develop strategic resource plan to deliver the project; 3.8.2 Define the quality and quantity of resources required;

<p>3.8.3 Identify the potential sources of resources and negotiate their acquisition;</p> <p>3.8.4 Allocate and distribute resources according to defined need;</p> <p>3.8.5 Evaluate resource usage and take any necessary corrective actions.</p>
<p><b>3.9 Procurement</b></p> <p>3.9.1 Agree on procurement needs, options and processes;</p> <p>3.9.2 Contribute to the evaluation and selection of suppliers and partners;</p> <p>3.9.3 Contribute to the negotiation and agreement of contractual terms and conditions that meet project objectives;</p> <p>3.9.4 Supervise the execution of contracts, address issues and seek redress where necessary.</p>
<p><b>3.10 Plan and control</b></p> <p>3.10.1 Start the project and develop and get agreement on the project management plan;</p> <p>3.10.2 Initiate and manage the transition to a new project phase;</p> <p>3.10.3 Control project performance against the project plan and take any necessary remedial actions;</p> <p>3.10.4 Report on project progress;</p> <p>3.10.5 Assess, get agreement on, and implement project changes;</p> <p>3.10.6 Close and evaluate a phase or the project.</p>
<p><b>3.11 Risk and opportunity</b></p> <p>3.11.1 Develop and implement a risk management framework;</p> <p>3.11.2 Identify risks and opportunities;</p> <p>3.11.3 Assess the probability and impact of risks and opportunities;</p> <p>3.11.4 Select strategies and implement response plans to address risks and opportunities;</p> <p>3.11.5 Evaluate and monitor risks, opportunities and implemented responses.</p>
<p><b>3.12 Stakeholders</b></p> <p>3.12.1 Identify stakeholders and analyse their interests and influence;</p> <p>3.12.2 Develop and maintain a stakeholder strategy and communication plan;</p> <p>3.12.3 Engage with the executive, sponsors and higher management to gain commitment and to manage interests and expectations;</p> <p>3.12.4 Engage with users, partners and suppliers to gain their cooperation and commitment;</p> <p>3.12.5 Organise and maintain networks and alliances.</p>
<p><b>3.13 Change and transformation</b></p> <p>3.13.1 Assess the adaptability to change of the organisation(s);</p> <p>3.13.2 Identify change requirements and transformation opportunities;</p> <p>3.13.3 Develop change or transformation strategy;</p> <p>3.13.4 Implement change or transformation management strategy.</p>

Source: Compiled by the author based on IPMA ICB for project management, 2015.

## Annex 2

The questionnaire of interviews, compiled by the author in Lithuanian and translated into English language.

1. Kas Jus paskatino tapti (tarptautinių) projektų vadovu?
  2. Kai nusprendžiate, kad norite inicijuoti projektą, kokių veikslių imatės?
  3. Ką reikia daryti, kad gerai įvykdytum projektą? / Kaip užtikrinate, kad projektas būtų įgyvendintas laiku, pasiekiant planuotus tikslus ir biudžeto apimtyje?
  4. Kaip formuojate projekto komandą?
  5. Kaip palaikote komandos narių motyvaciją ir įsitraukimą?
  6. Kokias bendravimo priemones komandoje taikote?
  7. Vykdam projektą, su kokiais iššūkiais susidūrėte, kokių įgūdžių ir žinių reikėjo, kad juos įveiktumėte?
  8. Kaip prioritetuojate darbus vykdam projektą?
  9. Kokią įtaką projekto valdymui daro Jūsų kaip mokslininko kompetencijos? / ar moksliniam/studijų projektui galėtų vadovauti ne mokslininkas? Kokie to privalumai ir trūkumai?
  10. Kas Jus labiausiai vargina vadovaujant projektui ir kaip su tuo tvarkotės?
  11. Kas Jus labiausiai motyvuoja vadovaujant projektui?
  12. Galbūt galėtumėte įvardinti keletą esminių kompetencijų, kurios yra būtinos projekto vadovui, įgyvendinančiam būtent mokslo (arba studijų) projektus? (turint omenyje, kad mokslo ir studijų projektai turi gan daug skirtumų ir ypatumų lyginant juos su kito pobūdžio projektais) (galbūt reikalingos ir papildomos ar kitos kompetencijos)
  13. Kokie mokymai ar kt. kvalifikacijos kėlimo būdai yra svarbūs (tarptautinių) mokslinių projektų vadovui?
  14. Kokias kompetencijas norėtumėte tobulinti, nes jaučiate, kad jos svarbios tarptautinių projektų vadovui?
  15. Kokius pagalbinius įrankius/priemones naudojate projekto valdyme?
  16. Kas Jums yra sėkmingas projektas?
  17. Ką patartumėte (tarptautinio) mokslinio projekto vadovui, pirmą kartą pradedančiam vadovauti projektui?
- 
1. What made you want to become an international project manager?
  2. When you decide that you want to initiate a project, what steps do you take?

3. What do you need to do to execute the project well? / How do you ensure that the project is delivered on time, on budget and on target?
4. How do you form the project team?
5. How do you keep team members motivated and engaged?
6. What communication tools do you use within the team?
7. What challenges did you face during the project, and what skills and knowledge were needed to overcome them?
8. How do you prioritise your work during the project?
9. How do your competencies as a researcher influence the management of the project? /Could a scientific/study project be managed by a non-scientist? What are the advantages and disadvantages of this?
10. What is the most frustrating part of project management, and how do you deal with it?
11. What motivates you the most when managing a project?
12. Could you name some key competencies that are essential for a project manager in a research (or study) project? (bearing in mind that research and study projects have many differences and peculiarities compared to other types of projects) (additional or different competencies may also be required)
13. What training or other professional development is essential for the leader of (international) scientific projects?
14. Which competencies would you like to develop because you feel they are essential for an international project manager?
15. What support tools/tools do you use in project management?
16. What is a successful project for you?
17. What advice would you give to a (international) scientific project manager starting to manage a project for the first time?