The value of virtual project management in the albanian market

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Abstract

The growth of the internet and the development of collaborative software have introduced a new dimension of project management. This paper explores the literature evaluating virtual project management and virtual teams to determine the extent of new technologies affecting projects with members in distributed locations. It has been found the new communication channels offer opportunities for participation, but it is even more difficult to manage a virtual team than a team on site. The ever-increasing importance of projects in the market is leaving businesses looking for better integration techniques to virtualize their project environments. Through virtualization, organizations can have positive impacts on communities across geographic boundaries and resource constraints.

Virtual project management is a discipline that embodies the potential of connection when talented are geographically dispersed to achieve shared project success. Available research confirms that this is a challenging goal. Factors like time difference, different cultures, or lack of face presence results in added complexity to managing virtual teams. However, if one is able to overcome these obstacles, the results are promising. Empirical research emphasizes that the demand for VPM is constantly increasing, and it even seems clear that there is no going back.

Keywords: *Traditional project management, Virtual project management, Collaboration technologies, Internet based tools.*

Introduction

Today's workplace is not what it used to be a few decades ago – it has become increasingly flexible and mobile and will be even more so in the near future. Companies hiring only homogenous,local personnel are rare; growing globalization and internationalization are triggers

for a dispersed, heterogeneous workforce. Organizational forms shift and increasingly work is accomplished in projects, allowing companies to become more agile. However, this development is only possible with the help of proper technology. The explosive rise of the Internet within the past two decades enabled completely new forms of collaboration. It is now common to have colleagues situated in different time zones work while you are sleeping.

Having coworkers from different regions requires the ability to deal with diverse cultures and habits. Obviously, managing a project under such increasingly complex circumstances becomes even more challenging. With this development, the domain of virtual project management (VPM) emerged. Virtual projects are projects in which the members are geographically dispersed; virtual projects are already seen as an essential component of modern organizations (Zigurs, Khazanchi, & Mametjanov, 2007). The field of VPM seeks to describe how to successfully manage such projects. In today's fast-paced world, appropriate tools are vital to manage and synchronize the flow of information. A variety of specialized tools for project management exist to support the team leader and participants. A very recent trend in this field is the development of webbased collaboration tools, going hand in hand with the much-cited "Web 2.0" phenomenon. This thesis will examine this trend, pointing out strengths and weaknesses while elaborating how to successfully use such tools and predict future directio

Study objective and Research Questions

The main objectives of this study are: identify the main reasons leading to virtual project management. Identify the instruments, mechanisms, tools that influence the increase of the effectiveness of virtual project management. The author interest in those areas and a discussion with leading experts in the field of VPM led to the research questions of, "What are the factors that condition virtual project management? and What are the tools that help effective virtual project management?" In view of the purpose this study includes primary data, collected from 150 questionnaires completed by students and employees of the European University of Tirana as well as employees of the Firdeus Foundation to see more specifically the technology-based collaboration tools for a project management already virtually. These research questions are relevant because those business trends of using virtual teams for project management are already utilized in countless organizations worldwide. However, research on when it is most efficient to use different collaboration tools has not yet been explored (Donker & Blumberg, 2008).

Literature Rivew

In the literature review section, a thorough look on the current literature is provided. First, to fully understand the complexity of virtual project management, the necessary basics of traditional project management will be discussed and the required terms defined. Different approaches to project management will be introduced, including the description of the project management process groups. Then, the current paradigm shift towards managing projects in a more collaborative and virtual environment will be examined, which leads to a discussion about the needed technology for this development. Within this discussion, the terms of virtuality, virtual teams and knowledge management are discussed. Finally, the essential key findings will be reviewed and summarized. Because this thesis has a focus on collaboration techniques, the emphasis will be on the technology rather than on the management level.

Throughout the current literature, it is commonly agreed that projects have become increasingly important during the last few decades and are now often used in managing a business. The management of projects is viewed as "a means to track and organize a project and is seen as "vital to the survival of many organizations" Chen, Romano, & Nunamaker (2003). There are a variety of definitions for projects and for project management, but no standard definition.Uniqueness is important because for the manufacturing process of identical products, a project structure

would be inefficient. Litke (2005) also points out that projects, although they are unique, almost always have certain conditions in common. This is an important and necessary requirement for enabling a learning-by-experience process, enabling the organization to benefit in future projects. Additionally, projects have clear goals, limited resources, and a specific process structure (Litke, 2005). According to Gareis (2006), projects can also be seen as a social system, a construct, or a temporary organization. The latter is, particularly in Europe, Trends in Virtual Project Management commonly agreed upon (Huemann, 2008) and embodies the thought that projects, just as common organizations, have a specific identity; thus, a project can be seen as a temporary organization with an emphasis on the start- and end processes (Gareis, 2006). However, this seems to conflict with the view of the PMBOK® Guide (2008) which mentioned that projects cannot operate as a closed system and only exist within an organization, needing input information and delivering capabilities. To summarize and point out the differences: a project can either be seen as temporarily organization and social system (Gareis, 2006) or as an unique task with a clear start and end point (Project Management Institute, 2008). For this thesis, the latter definition is sufficient and is used.

Every project is unique, and there are many different types of projects. As not every project is suitable to be conducted as a virtual project, different perspectives of project typologies are presented. Chen, Romano, et al. (2003), based on Whittaker (2000), identified three types of projects: (1) manual, (2) machine, and (3) mind. *Manual projects*, as the name suggests, are accomplished by using manual labor. Examples are found in the construction industry and the "manager" has an easy job controlling the team by watching them work. *Machine projects* use technology and are more complex than manual projects. Specialization and skills of the workers increase and higher task interdependence is in place. Thus, coordination becomes more complex and important. *Mind projects* are the most complex form within this typology and the focus of our attention. The capital for this type of project is the "mind" rather than the "hand." Examples include software development or graphic design. The output is the result of information and thinking, which is not always tangible. The progress of the project can no longer be monitored by observation; explicit communication, concerted collaboration.

Due to business and technical forces, the domain of project management (PM) experienced significant changes over the last years. The fundamentals of PM as it had been developed have changed over the last decade (Evaristo & van Fenema (1999). Ten years later, this development within PM continues as methods and tools become more sophisticated and well developed. Evaristo & van Fenema (1999) named several factors for this development. The primary trigger, however, is information and communication technology, which enables effective global teamwork. Increased globalization and internationalization of organizations as

well as the increased development of information technology (IT) have significant consequences for companies (Krejci, 2009). Due to information technology, the needed support for the development of new organizational forms is now available (Powell, Piccoli, & Ives, 2004). Romano, Chen, and Nunamaker (2002) underlined this observation by stating that during the last three decades, "the revolutionary change to PM is the computerized PM" (p. 7).

However, this development was still focused on automation and featured a single-project perspective. Romano et al. (2002) further predict that "the next big change of PM will be collaboration" (p. 7), the focus of attention for this thesis. Increasingly globalized markets force companies to integrate global managerial and business processes. This has influenced corporations to use global sourcing with increasing frequency (i.e., obtaining goods and services from a global market across geopolitical boundaries) for their benefit (e.g., Krejci, 2009; Romano, et al., 2002). Furthermore, a project's cycle time can be reduced by using time zone differences to the advantage. Lastly, research and development (R&D) can be organized around globally distributed centers of excellence. These factors have led to the new discipline of virtual project management, which differs from traditional project management (and a traditional project) known as the management of a single project in a single location.

But what makes a team virtual? First, we need to differentiate between teams operating in a traditional environment, to which we will refer as traditional teams from now on, and virtual teams. Traditional teams consist of members working together in the same location, thus having easy access to face-to-face communication, which is their primary channel of communication. (Powell, et al., 2004). For virtual teams, many definitions exist, but we define virtual teams "as groups of geographically, organizationally and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks" (Powell, et al., 2004, p. 7). This means that all team members are strongly dependent on technology and are working toward common goals. Zigurs (2003) argues that "virtual teams come in many flavors, and 'virtuality' as a characteristic can be defined on many dimensions" (p. 339), where we already defined virtuality as at least geographically dispersed and dependent on IT (Khazanchi & Zigurs, 2005; Zigurs, et al., 2007).

Technology is at the heart of any virtual team. In essence, "technology is simply described as a tool that requires human input" (Bergiel, et al., 2008, p. 103) and has the potential to fail if insufficient consideration is given to the user's perspective. Ongoing developments will provide potential for dramatic changes in how team members communicate and should be adapted in an evolutionary way to communicate effectively (Zigurs, 2003). Finally, *leadership* differs from traditional teams in that "virtual teams are often characterized by high levels of autonomy

rather than direct control" (Zigurs, 2003, p. 342) and thus becomes more of a collective effort that is distributed between team members. Powell et al. (2004) also states that leadership in an virtual environment needs to be more flexible and willing to let others take the lead when necessary. Characteristics that make a successful leader in traditional teams such as personal traits, open communication, or physical attendance are missing in a virtual environment. Virtual team leaders should provide training on participation in virtual teams, conduct team-building exercises, establish standards for communication, structure the process, and nurture self-leadership (Zigurs, 2003). Furthermore, choosing the right individuals suitable for virtual team work is considered absolutely crucial (Krejci, 2009).

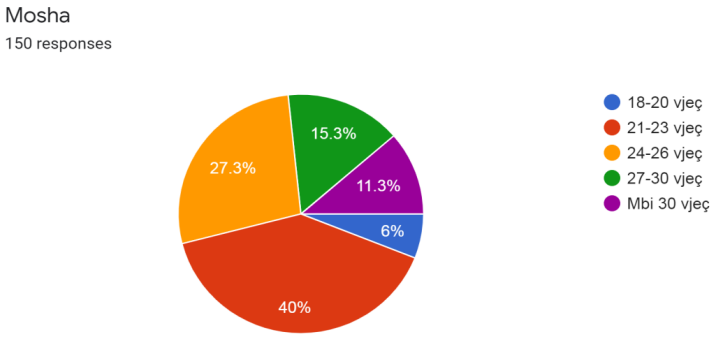
Methodology

In terms of qualitative data analysis, there are a variety of approaches. According to Miles and Huberman (1994), the analysis process for qualitative data involves three main steps:

1. Data reduction, which refers to the process of selecting, concentrating, simplifying, abstracting, and converting data presented into transcripts.
2. Next is the display of data to draw conclusions.
3. Finally, the completion of the verification describes the interpretation of the meaning of the collected results and the testing of their "confirmability"

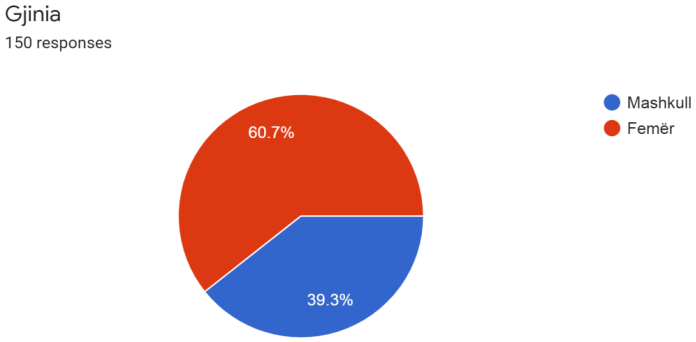
Some qualitative methods of analysis are based on the generation of a certain group of categories, developed either before or during the data collection process. The data are classified into categories and then compared. Cross-case analyzes are widely used in social studies, such as management information systems. The basic idea is to rely on a framework to guide the analysis of multiple, qualitative case studies (interviews). Finally, the assessment should provide data on the socio-economic and demographic characteristics of the selected sample, behavioral data, etc. In social science studies, but not only the characteristics of the respondents' staff have a very significant role in giving answers to the problem, keeping this in mind, in this study a series of personal characteristics namely age, gender, location, position in the company etc. Out of 150 respondents were examined and presented in this chapter. Exactly this part which is described below is dedicated to the analysis in relation to this data. This section presents the results obtained from the analysis of the empirical research conducted for this thesis. As argued above, the main research method was a questionnaire, providing mainly quantitative data but also some qualitative data.

FIGURE 1. Age of respondents



The results of the survey show that 40% belong to the age group 21-23 years, followed by 27.3% from the age group 24-26 years. While 27-30 years old make up 15.3%, over 30 years old make up 11.3% and 18-20 years old very little, ie 6%. The result also shows that most of the respondents are aged 21-23, which means that this age tries to look at the future of management even virtually.

FIGURE 2. Gender of respondents

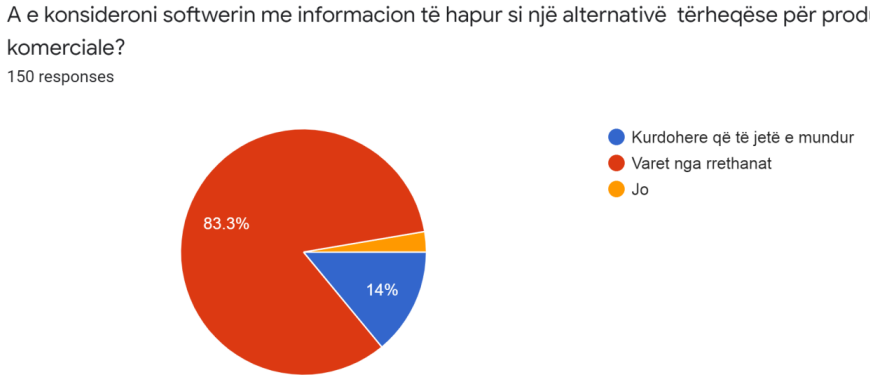


Gender is used to recognize the contribution of men and women to the opportunities that virtual project management can provide. This information will help the organization consider the importance of gender mainstreaming in future virtual project management. The number of respondents in our survey was 150 of which 91 are female and make up (60.7%), while 59 are male (39.3%). The number of women is more compared to men. This is due to the fact that women are probably more willing and carry more responsibilities to complete the questionnaire compared to men, has to do with their commitment.

FIGURE 3. Being active in knowledge management within the network

In terms of the number of respondents contributing content to the networks, it was expected that the numbers would drop significantly. More than half of the participants (53.3%) in the survey have occasionally contributed to the content of a network, with (45.3%) stating that they contribute regularly. This may be due to more enterprises using internal networking systems for knowledge management or documentation.

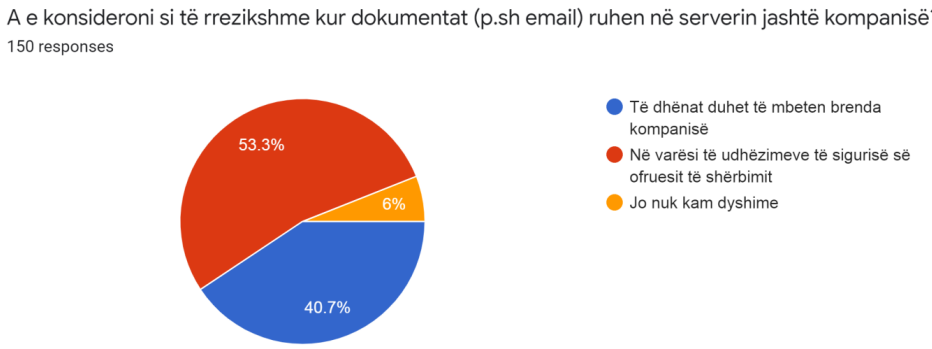
FIGURE 4. Open source software



Another survey question asked the respondent's opinion about open source software. The expected result was that a majority would consider this type of program useful, but a significant proportion of respondents would say that open source is questionable, depending on the situation we are in to use about 127 people (83.3%) for business uses, especially due to lack of professional support. 23

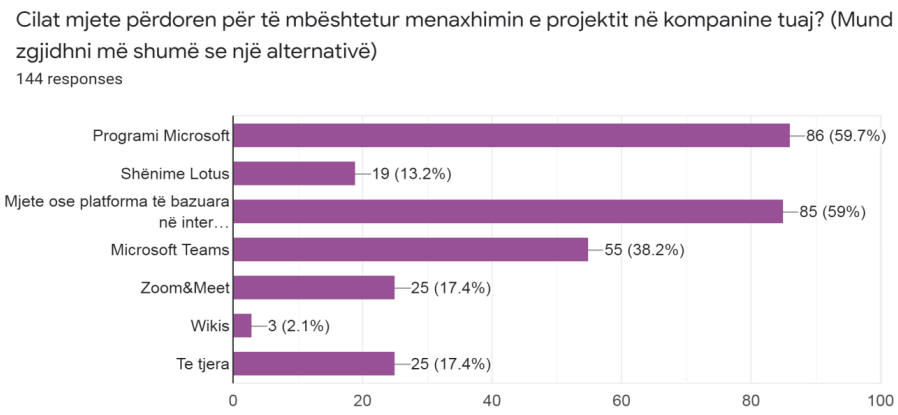
people (14%) viewed positive open source software as a growing opportunity for the company.

FIGURE 5. Risk of documents on the server outside the company



Two-thirds believed that this decision was dependent on the safety instructions of the service provider 63 people (40.7%). The hypothesis was that a large number (at least a third) of respondents would be skeptical and would prefer business documents to be stored on enterprise servers. The questionnaire confirmed this view in that respondents wanted data stored on company-owned servers 80 people (53.3%). Only 7 out of 150 participants had no concerns about data security.

FIGURE 6. Tools used in project management in companies



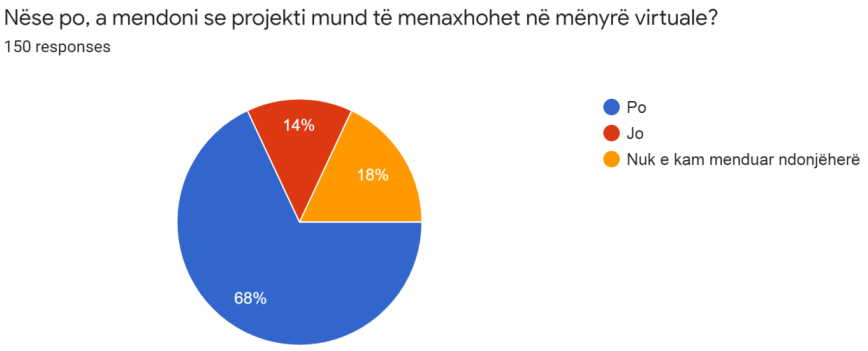
In terms of specific tools used in project management, the Microsoft Project Program is still the most used tool 59.7%. This is in line with trends in virtual

literature project management current literature (Zigurs & Khazanchi, 2008). Finally, Internet-based collaboration tools rank second with 59%, Microsoft Teams 38.2%, Zom & Meet 17.4%, along with other tools ranked fourth. It can definitely be interpreted that this trend is moving towards internet-based tools and far from the tradition of locally installed software applications, such as wikis, or client-server applications, such as Lotus Notes.

FIGURE 7. Information about the function of projects

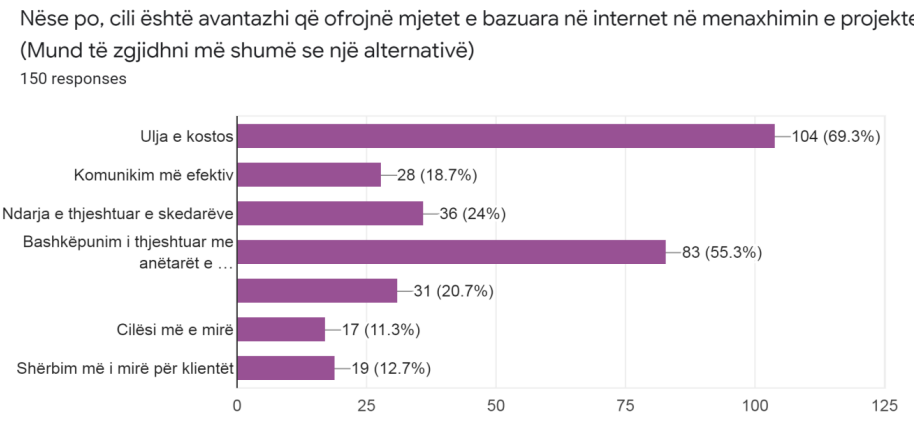
Projects exist to bring about a product or service that did not exist before. In this sense, a project is unique. The number of projects and the number of employees involved in the projects is constantly increasing. The project itself is a temporary effort undertaken to create a unique product, service or result. If we look at figure 7 we notice that most of the 150 respondents answered 140 (92%) that they have information on how projects work. 12 people (8%) do not have information on how projects work. This means that the target chosen by me gives a positive signal in the way projects work and their recognition.

FIGURE 8. Thinking about project management virtually



Refering to the graph above we see that 102 people (68%) think that projects can be managed virtually. This is also related to the fact that they are well acquainted with social networks, use tools based on the Internet. 22 people (14%) are against virtual management, 28 people (18%) have never thought that projects can be managed virtually. This result shows that very soon we can have national and especially international projects which can be managed virtually.

FIGURE 9. The advantage offered by web tools in virtual management



When asked about the advantages of using web-based collaboration tools for project management, seven answers were the most common: 1) Cost reduction, 2) More effective communication, 3) Simplified collaboration with distributed team members, 4) Simplified cooperation with team members, 5) All stored in a centralized place (copy, 6) Better quality, 7) Better customer service. According to 150 responses from respondents the main advantage is:

1. Cost reduction, 104 people (69.3%)
2. Simplified cooperation with team members, 83 people (55.3%)
3. Simplified file sharing, 36 people (24%)
4. All to be stored in a centralized place (copy), 31 persons (20.7%)
5. More effective communication, 28 people (18.7%)
6. Best customer service, 19 people (12.7%)

FIGURE 10. Reasons why you are against virtual project management

When asked why they do not view project management virtually five answers were the most common: 1) Difficulty, 2) Lack of coordination, 3) Lack of control, 4) Possibility of financial abuse, 5) avoidance of responsibilities. According to 150 responses from respondents the main reason why they do not agree is:

1. Avoidance of responsibilities, 71 persons (47.3%)
2. Impossibility of control, 62 persons (41.3%)
3. Difficulty, 57 people (38%)
4. Lack of coordination, 50 people (33.3%)
5. Possibility of financial abuse, 49 people (32.7%)

Results

The framework adapted by Carte and Chidambaram (2004) helped to identify the additional and reductive capabilities of collaboration technologies in general and web-based systems in particular. It has been found that web-based systems offer, compared to others collaborative technologies great advantages and opportunities for project management. Overall, the research suggests that through the use of internet-based technologies in project management, not only work practices and employment opportunities change, but also organizational structures. Social technologies give more power to the individual and thus make hierarchies become more and more flattened. Direct, electronic communication can reduce bureaucracy.

Collaborative technologies can be valuable during the early stages of a project as they help people get together and not just focus strictly on the task. This is especially important in a virtual environment where face-to-face communications

are scarce or non-existent. During the early stages of the project, it is important to create a common language, clearly define the project goals and key terms, and set tasks. Thus, an additional capability of a certain collaboration like technology can be seen as an added value. Key additional value-related capabilities for web-based collaboration tools derived from the questionnaire data include:

- Electronic documentation, which means that all communication is sent automatically and in an electronic format, in a simple way to be archived.
- Furthermore, employees can be spread all over the world and are still able to work effectively using a shared platform.
- In addition, processes need to be in place to enable teams to work together effectively and efficiently.

All this proves the hypothesis that virtual project management increases the opportunities for its successful implementation through the accomplishment of timely and quality tasks.

Conclusions and Impactions

Based on the study of the first research question what are the factors that condition the virtual project management, it was concluded that the main tools that condition the virtual project management are tools, web-based platforms, in terms of familiarity, importance and the necessity that the internet has today. Overall, the research suggests that through the use of internet-based technologies in project management, not only work practices and employment opportunities change, but organizational structures as well. Social technologies give more power to the individual thus making the hierarchies more and more flattened. Direct, electronic communication can reduce bureaucracy. Internet communication tools save money in various ways. Email, instant messaging on various platforms and social networks are all free. There are different types of internet based communication tools, such as email, VoIP, forums, video, audio, internet chats and social networks among others.

The conclusion of this section shows that in general, most employees already use internet-based technologies, but there is still some doubt about using these technologies in a business context. Using the latest tools and methods of communication through the internet is essential for bringing business into the modern age of communication.

1. The essential recommendation regarding the conclusions of the first research question is that institutions and organizations in Albania should review the

current project management part by implementing the latest technology-based collaboration tools.

2. Another area, beyond this thesis, is the use of three-dimensional (3D) environments for virtual project management. This tool would even encourage employees and managers to be even more active at work. Due to the growth of IT such approaches are becoming more popular. These 3D environments allow for a more immersive and natural user experience.

Analyzing the second research question of this study which are the tools that help the effective virtual project management it was concluded that Microsoft Project, Internet based Platforms and Microsoft Teams are among the main instruments. Most respondents used internet-based instruments more than once a day during their work. It is also very important to note that most of them knew project management, had previously been part of the projects and their implementation. They saw the future virtual project management approach as a good opportunity due to cost reduction and simplified collaboration of team members. Another part shared the opposite view of avoiding responsibilities and complete lack of control. The main phases where social technologies were important according to the respondents included monitoring. The stage where the project needed internal coordination was planning and modeling.

The conclusion of this section shows that the basic tools that help effective project management are Microsoft Project, Microsoft Teams, Internet based platforms. Thus, an additional ability of a certain collaboration like the instruments mentioned above can be seen as an added value. Key additional values in relation to these web-based tools derived from the questionnaire data include:

- Electronic documentation, which means that all communication is sent automatically and in an electronic format, in a simple way to be archived.
- Enhanced networking or certain software capabilities, which means that added value can be provided by integrating images, videos or other forms of content.
- Furthermore, employees can be spread all over the world and are still able to work effectively using a shared platform.
- In addition, processes need to be in place to enable teams to work together effectively and efficiently.

3. The essential recommendation regarding the conclusions of the second research question is that project managers should decide within their day-to-day workflow the use of technology-based tools or otherwise technologies are not used effectively.
4. Providing proper training by companies to employees regarding these

instruments, often and erroneously considered a waste of time and money, can reduce errors in adapting to these tools. All this work is in function of virtual project management. Empirical research underlined the assumption that the demand for VPM is constantly increasing, and it even seems clear that there is no going back.

Virtual project management is a discipline that embodies the potential of connection when talented are geographically dispersed to achieve shared project success. Available research confirms that this is a challenging goal. Factors like time difference, different cultures, or lack of face, result in added complexity to managing virtual teams. However, if one is able to overcome these obstacles, the results are promising.

Cost reduction, access to global talent, increased demand for flexibility, and flattened hierarchies were named as the main drivers for this development. However, this progress towards virtual projects depends on the capabilities of information and communication technology. Due to the ubiquity of the ubiquitous internet there was a recent trend towards the use of internet-based collaboration tools for project management. Research has shown that there is not yet a single tool that is able to unite all the needs of collaboration and project management. Therefore, in almost all cases, the combination of different tools and techniques is being used to compensate for this shortcoming. Therefore, the research questions researched during this thesis aimed to shed light on the issues of factors that condition the virtual project management and the instruments that help the effective virtual project management.

From this perspective, the research identified coordination support, a single source of data, electronic documentation, enhanced programming capabilities as the main added value of Internet-based tools. Secondly, it is very important that these strong processes support the use of cooperation tools and social technologies. Also, a big challenge that still remains is the adoption of management, practices in a virtual environment. However, if implemented thoughtfully, web-based collaboration tools provide opportunities to support virtual project management.

The literature review as well as the empirical study found that the requirements for collaboration and communication change over the life cycle of a project. This thesis revealed the existence of a research gap as to when internet-based collaboration techniques are most effectively applied. The early stages, namely initiation and planning, needed more communication and thus, social technologies agreed to provide more value. Reasons include the desire to establish initial rapport and cohesion between team members, but also frequent communication with project stakeholders. Moreover, the use of tools changes as the project progresses: during the early stages, social networks will help connect people and create reports while

Microsoft Office (Microsoft Project, Microsoft Teams) help to promote knowledge management and documentation during the stages subsequent. However this thesis also makes a valuable contribution to an implementation practice of topics related to virtual project management. Literature review as well as empirical study have shown that the demand for virtual project management and virtual teams will increase inexplicably. Therefore the importance of this research field is increasing.

Beyond this study and the relevant conclusions for each of the research questions I think:

5. This thesis should be seen as an appropriate starting point for future research projects related to the virtual project management practice.
6. It can serve as a further continuation of research in the field of project management during the development of a third cycle of studies, doctoral ones.

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