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## STUDY ON VIRTUAL PROJECT MANAGEMENT IN IT SECTOR IN INDIA

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### ABSTRACT

The nature of teamwork management has changed significantly due to changes in organizations and the nature of the work they do. Organizations have become more distributed across geographies and industries. Relationships between people within the organization a those previously considered outside (customers, suppliers, managers of cooperating organizations, other interested parties) are increasingly important. Organizations have discovered the value of working together. During implementation IT projects in a global environment, popular the strategy is to create virtual teams. Target of this paper is to examine what competence is an IT project a manager must successfully lead a virtual IT team. The question is solved from the point of view of competences presented at IPMA (International Project Management Association) competence baseline or The Eye of Competences. The results of the research, as well as the survey carried out, he emphasized that both soft and hard skills are needed for the optimal IT project manager to lead a virtual team. Being excellent is not enough to succeed in this field in technical competences. soft skills such as communication, teamwork and leadership are equally essential.

The Competencies that scored highest in the survey: Clarity goals, leadership and project management, communication, reliability and efficiency, teamwork and quality management.

## INTRODUCTION

In recent years, companies have received more and more attention. Virtual teams as a way to connect and interact geographically Distributed workforce, reducing related costs Acceleration through global collaboration and the compatibility of virtual teams has powerful advantages Attracting the best talents for a specific and independent job A kind of "just-in-time" geolocation. Talent approaches the software industry is no exception to this rule. Affected The globalization of this process continues today. These changes are subject to availability. Lots of qualified software engineers A low-cost economy that has the ability and desire to do it Outsourcing and overseas software development. While virtual teams offer many benefits, Number of challenges One of these challenges is developing. Effective global leader

What skills do you have in this changing environment? IT project manager to get this challenge? They have both soft and hard skills focus? This paper explains the above question in terms of special powers In the IPMA Competence Framework or Points of Competence. This research is only technically focused and the category of behaviour leaves the category of context untouchable

## RESEARCH METHODOLOGY

The purpose of the survey was to try to find out what IT project managers must lead the way Successful virtual teams, such as hard and soft versions skills are required. welcome eligibility guidelines IPMA is from the perspective of competence, is technical and behavioural sector. However, the context is not included.

We designed and implemented the questionnaire. The questionnaire is divided into three parts. The first the section focuses on background information such as gender; international project and international experience study Most of the questions in this section are general background question but to maintain confidentiality it is necessary to limit this section. In the second part, questions are asked about the latter projects that individuals participate in and contribute to questions such as role in the group, group size, number. Number of organizations in the project, location and the maximum time difference between locations, communication frequency, communication media, began / began and began some team building was done. Finally, there are participants asked if they have noticed problems in the last draft. They were given a list of the 14 things they said the most problems in distributed groups.

The main finding of the survey is that there is a combination of soft and hard to manage virtual teams in IT projects. Technical skills are not enough to succeed in this field. In most cases there is no significant correlation between the two parameters; often there is only a little connection. An exception was the association between feeling isolated and never meeting a group face-to-face. A correlation was also found between certain skills and roles in the group.

We selected 51 participants, 31 were male and 20 females. Educational level was high; 23 participants had cross-cultural training and remaining had no cross-cultural training. The average of VT projects that the participants participated from 6-9 VT projects. 62% percent of the participants were regular team members in their project; the rest were other project members or stakeholders. Average project time was 6 months but the most common time was 6-12 months. Most of the projects had 2 languages or 54.2% and no project had more than four languages. Phone calls or Skype calls, Mails, Team Viewer, video calls were often the main mode of communication. The frequency of team meeting was rather high: 89% had team meetings weekly on internet and some of projects meets on daily.

This shows the main problems that arise in the project team. Lack of clear goals for the project and technical issues were the most common problems, but time differences, different holidays and recognition of need for support were also reported. Some of the challenges faced are due to persistence, cultural differences, lack of trust, or lack of leadership. No one faces persecution due to religious beliefs.

## LITERATURE REVIEW

### Project Planning

Abels et al. (2006, 1) link project natured work in to innovatively as it builds up from differing features compared to traditional work: limited time frame, designated team or organization and a new issue to address. Ergo, most of the projects conducted always deal with higher uncertainty and likelihood of risks. "Although planning does not guarantee project success, lack of planning will probably guarantee failure." - Dov, Raz & Shenhar (2003, 1) The key to success and avoidance of failure lies in proper planning in the initial state of the project.

In this first step towards project execution the aim is to gather a list of project requirements, which can be collected by several methods, such as interviews, workshops or prototypes. Interviews and workshops are a great way to gain opinions and knowledge from all the stakeholders, whereas prototypes can be an efficient way to build up raw versions of products to understand all opportunities, such as design and functions.

Whatever method is chosen, it is important to understand, weigh and ensure all the requirements properly before moving on to implementation, to avoid added costs, delays and confusion. (Phillips, 2013. 46-48) Rad, Parviz and Ginger Levin (2003. 21-22) agree that the basis of a project should be built of clearly identified requirements and goals, as they will function as the key metrics of the project's success.

However, it is fairly common for the requirements and goals to change as new issues manifest along the project. These changed interests will define the future of the project, whether it will be further developed or cancelled. The changes can often lead to increase in costs or time required. To minimize these issues, a project charter is recommended.

### Project Evaluation

Thorough and continuous evaluation is crucial for a project, Thamhain (2014. 129- 130) stresses. A failed project not only weakens the company's market position, but wastes resources and key competencies. Project evaluation is a process where the project's progress and financial health are reviewed on a regular basis, Taylor (2007. 162-163) explains.

An effective way to view the state of the project, is to set specific key performance indicators (KPI's). "A KPI is a metric measuring how well the organization or an individual performs an operational, tactical or strategic activity that is critical for the current and future success of the organization." (Kerzner 2017. 22) Evaluation does not only consist of testing, but should highly link to pre-determined goals and tasks to the target of evaluation. Frechtling (2002, 3) believes that the key to project development lies in thorough evaluation, by understanding which project aspects of tasks are not being met and why. Additionally, as projects often tackle new issues and/ or methods used there are often new insights to discover. Therefore, project work can widen understanding and open new doors.

## Risk Management

Risks are somewhat inevitable in project management and often lead to changes in scope, cost or schedule. Thorough risk management is of high priority to prevent the expand of small unsolved issues. The aim of risk management is to identify the biggest risks, their probability of occurrence, estimated impact, as well as the required responses, Rad et al. (2003. 27-29) explain.

The contemporary business environment includes an increased number of potential risks in social, cultural and organizational areas. Reed & Knight (Martinelli et al 2017. 42, as cited in Reed & Knight, 2010) call these additional virtual risks “silent killers”, as more traditionally customed project managers used to the traditional business environment may err to ignore these. Some of the biggest risks for virtual teams are defective knowledge exchange, lack of cohesion and poor technical solutions. The advanced technologies enable us to identify and manage issues that are analytically visible, such as schedule, budget and technical risks. However, there is another spectrum of risks stemming from unconnected issues which can end up harming the project. The awareness of the complexity of these risks has lead to project managers understanding the importance of both internal and external collaboration to cover as much ground as possible. According to Rad et al. (2003. 27-29) the key to successful risk management is a continuous, collaborative communication between all the stakeholders, which lowers the risk for undetected issues and broadens the knowledge base. To conclude, it is most effective to combine tools, such as internal review meetings and brainstorming sessions with external tools like voice of the customer (VoC) and user-centred design (USD) and supplement the risk mitigation with analytical analysis. (Thamhain 2014. 308-313)

## Virtual Communication

When choosing the right technological solutions for communication, it is important to consider the needs of the team. Synchronous communication is necessary for on-time decision making, problem solving and brainstorming, whereas non-urgent issues such as information and data exchange can be carried out asynchronously. Additionally, it is important to consider what kind of interaction is required by the team: conversational relationship building, collaborative communication, transactional exchange of material or all of the above.

Location wise, globally distributed projects are the most challenging form due to the distribution of time, distance and culture. These factors leave little to no room for synchronous communication and therefore centralization of communication is suggested. (Martinelli, Russ J., et al. 2017. 177-178) Projects that are not too related with other projects of the organization and not highly dependent on other team members can be executed through asynchronous communication.

Highly complex tasks, however, require combination of both synchronous and asynchronous communication as they require collaboration, knowledge sharing and can be interdependent with other projects. Project workflow defines how the tasks must be completed. Sequential tasks are interdependent and cannot be completed without each other. Parallel tasks, however, can be carried out independently prior to final integration. Ergo, both types of workflows require collaboration and therefore an electronic workspace. (Martinelli, Russ J., et al. 2017. 179-180)

## CONCLUSION

From the survey results and literature review, it can be concluded that leading a virtual team requires both soft and hard skills for an ideal IT project manager. Being good at technical skills is not enough to succeed in this field. Soft skills such as communication, teamwork and leadership are also important. Although the research is limited to software companies, it should show what it takes to manage IT projects using virtual teams. Future research is needed to further investigate the reach of globally distributed teams and their leadership in the IT sector. In summary, the most important skills to successfully run a virtual IT team are:

- The team has to be able to see the whole picture / Clarity of objectives
- Leadership/Project management
- Communication
- Reliability/Efficiency
- Teamwork
- Quality Management

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