An Analysis of Web-based Document Management and Communication Tools Usage Among Project Managers

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ABSTRACT

The article analyzes modern cloud document management systems and communication tools from the viewpoint of EU project managers, who lead multidisciplinary, multilingual and international teams. It also explores the types of users who use these tools as well as the motivation factors guiding their choices. The research includes observation within the project group, interviews and semi-structured surveys among 40 EU project managers, who have managed 244 EU projects. The main finding is that a lot of project managers still don’t use shared, cloud document system. The biggest obstacle to more efficient usage of existing systems is their un-friendliness, security concerns and lack of skills. Meetings are still perceived as the most efficient channel for distributing and receiving project tasks, but they are closely followed by communication software. Applying the authors’ findings to the project management practice can lead to better communication and shared document storage management, which can influence overall effectiveness of project management.

KEYWORDS
Cloud, Document Management, Project Communication, Project Management, Virtual Teams

INTRODUCTION

Imagine you are a project manager of an EU project, coordinating an international team. You are aware of the fact, that the single most significant factor affecting the success of a project is the communication ability of the project manager (Zulch, 2014).

How can you live up to such expectations when project participants come from various cultures and organizations? They have various beliefs and statuses within their organizations. Partners use their own documentation and communication information systems and processes used within their organizations. For shared project purposes, yet another documentation and communication system is usually selected. Project partners’ knowledge and motivation to use such systems may vary significantly.

The question is: Is it possible to achieve smooth and effective collaboration of a virtual team and timely finalization of tasks, and eventually reach project objectives in such complex environment?

The authors of this paper are involved in management of virtual project teams on a daily basis and struggle with similar issues as described in literature. They are especially interested in the IT aspect of virtual team management: shared documentation and IT-supported communication. Cloud-based document management tools (such as Google Drive, Dropbox, SharePoint, Office 365 and similar)
have been used for a decade and are quite mature in technological and usability terms. Nevertheless, their adoption and usage is still limited. Similarly, in the age of modern communication tools (email, sound & video conferences, chats, social media platforms), the selection of appropriate communication channels for different project management tasks is still an issue.

Firstly, we will present existing literature on the following topics: virtual teams, distributed teams, document management and similar. Then, we will present a typical EU project environment. Next, we will present the problem which is in the focus of our research: collaboration between project team members using online tools. We will summarize the types of project document management in 9 patterns. Next, we will present the results of the research (survey). These results include answers from various project participants and their attitude towards various communication tools and techniques. The results (descriptive statistics) were analyzed using pivot tables.

At the end, the results are discussed and guidelines for project managers are presented.

The results were used to create guidelines for project managers and reference processes for document and communication management, which are presented in the last chapter.

RELATED WORK

Virtual, Distributed Teams and Project Networks

Managing virtual teams is tightly integrated with effective usage of information technology (Olariu & Aldea, 2014). Electronic communication is ranked the highest among effective communication methods in some researches (Zulch, 2014) that were done among construction, occupational health, environment, safety, finance and claims managers in non-virtual teams.

Based on the vast research within project management area, the large share of knowledge-intensive projects performed by virtual teams struggle with serious issues (Ayoko, Konrad, & Boyle, 2012). Those issues can negatively influence achieving project objectives, communication and relations between team members.

(Harej & Horvat, 2007) state that a virtual team is defined by the degree of online communication, not the geographical dispersion. A temporary team is established for a specific time-limited project, whereas a permanent team is established for long-term tasks (such as open-source development community).

In contrast, other authors (Guzmán, Ramos, Seco, & Esteban, 2010) state the difference between virtual and traditional teams: members work at different geographical locations, they come from different cultures, have different teamwork practices, speak different languages, knowledge management and distribution is different and time difference makes agenda management difficult. Same authors also emphasize (among others) problems related to virtual teams: ineffective management of shared knowledge among different team members causes duplication and inconsistency.

Moreover, (Ale Ebrahim, Ahmed, & Taha, 2009) identified 12 factors which influence the virtual teams. The same authors compiled a comprehensive literature review on this topic and defined virtual team as geographically dispersed, driven by a common purpose, enabled by communication technologies and involved in cross-boundary collaboration. Other characteristics of virtual teams are: they are not permanent teams, the team size is small, the members are knowledge workers and may belong to different companies. Other authors offer similar definitions (Hertel, Geister, & Konradt, 2005; Joinson, 2002; Shea, Sherer, Quilling, & Blewett, 2011), (Watkins, 2013).

The main advantage of a virtual team is its agility. At the same time, those teams are especially vulnerable to mistrust, communication issues, conflicts and power struggles. (Ale Ebrahim et al., 2009) also compiled a list of advantages and disadvantages of virtual teams. Some of a virtual team’s disabling factors are addressed in this research, such as: requirements for complex technological applications, task-technology fitness, technophobia, training.
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