

COMMUNICATION MANAGEMENT IN PROJECT TEAMS – PRACTICES AND PATTERNS

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Abstract:

Many modern organizations carry out their business tasks using the project-based approach. Realization of projects requires appropriate management, which is of particular importance for the success of project implementation, and includes a number of areas, which are described in detail by many authors. One of the primary areas of project management is communication management, which is widely described in the literature, mainly due to the great importance that is attributed to this area of project management, and because of its impact on the success of the project, in particular IT projects carried out by dispersed teams. However, despite the existence of numerous sets of principles and methodologies concerning communication management and many available ICT tools and systems supporting this area, we are still witnessing many project failures or projects experiencing serious problems that result from improper communication management. The main goal of the paper is to identify real-life project communication management practices and accompanying factors described in subject literature, to summarize the collected information and use it in future research to develop a method of selecting the project communication management patterns most appropriate to the characteristics of a given project, the team and its environment. The study also reveals that ensuring proper and effective project communication it is not only a matter of preparing a communication plan, creating, collecting, distributing, storing project information, and identifying responsibilities for project team members and other project stakeholders, but also of having good personal contact with team members, developing positive relationships, and obeying fundamental rules of clear and positive communication.

Keywords: project communication management, communication management practices, project success, project communication management patterns, project management

1. INTRODUCTION

Many modern organizations carry out their business tasks using the project-based approach. Realization of projects requires a specific approach to task realization and appropriate management. Appropriate project management is of particular importance for the success of their implementation, and includes a number of areas, which are described in detail by many authors (among others Kerzner 2013; Meredith & Mantel, 2011; Schwalbe, 2013). The rules of conduct related to respective areas have been collected in methodologies or sets of principles, such as Project Management Body of Knowledge, Prince2, and many others, e.g. Adaptive Project Framework, Agile Software Development or Scrum, which are dedicated to IT projects.

One of the areas of project management described within these methodologies is communication management, which is considered to be of crucial importance to the success of the project, and on the one hand its importance is exalted by most stakeholders, but on the other hand, the communication processes and practices formalised in the company's project management methodology are neither followed nor prioritised by project managers (Monteiro de Carvalho, 2013). Also Papke-Shields and co-authors, in their research on the use of project management practices and the link thereof to project success, discover that practices related to communication are not given enough attention, while at the same time communication practices are found to be associated with most of the success dimensions (Papke-Shields et al., 2010). That is why despite the existence of principles and methodologies mentioned above and many available ICT tools and systems, we are still witnessing many project failures or projects experiencing serious problems that result from improper communication management (among others Conboy, 2010; Stoica & Brouse, 2013).

This situation calls for new solutions, which could give more precise and practical guidelines to project managers and team members concerning communication management patterns that should be applied to ensure effective communication. Such communication management patterns would be suited to the characteristics of the project, the project team and its environment.

The present paper constitutes the first step in developing a method of formulating project communication management patterns, and its aim is to identify real-life project communication management practices and accompanying factors described in subject literature, and to analyze and summarize this knowledge.

2. SIGNIFICANCE OF COMMUNICATION MANAGEMENT FOR PROJECT SUCCESS

Communication management is broadly described in the literature (see e.g. Dow & Taylor, 2010; Kliem, 2007 and papers cited therein), mainly due to the great importance that is attributed to this area of project management (Purna Sudhakar, 2012), and because of its impact on the success of the project (Ofori, 2013; Kerzner, 2013), in particular IT projects (Holzmann & Panizel, 2013) carried out by dispersed teams (Tone et al. 2009; Sidawi, 2012; Wagstrom & Herbsleb, 2006; Niinimäki et al., 2012; Han & Jung, 2014). Effective communication management within virtual project teams is of paramount importance and a fundamental competency that, if properly executed, connects every member of a project team, so that they can work together to achieve the project's objectives. If communication is not managed effectively and fully understood by Project Managers, project outcomes may be at risk.

According to PMI's Pulse research, 55 percent of Project Managers agree that effective communication with all stakeholders is the most critical success factor in project management (PMI, 2013). Effective project communications ensure that the right information reaches the right person at the right time and in a cost-effective manner. Communication is the key to keeping team members, managers, and stakeholders informed and on track to pursue the project objectives, as well as to identifying issues, risks, misunderstandings, and all other challenges to project completion. Effective communication is a critical element of team effectiveness, both in traditional and virtual teams (Pitts et al., 2012).

White and Fortune in their empirical study on practices in project management established a list of critical success factors for a project and 'clear communication channels' was a number 6 factor on the

list. It is worth noting that number 1 factor, which was 'clear goals/objectives' is also strongly dependent on clear and precise communication (White & Fortune, 2002).

In another study on critical factors that contribute to the success of a project, the author lists 'effective communication' among the four most important factors, next to 'top management support', 'clarity of purpose and goals' and 'stakeholders involvement' (Ofori, 2013). Effective communication techniques and appropriate leadership styles are emphasized by Nguyen as the success factors for building and managing high performance global virtual teams (Nguyen, 2013).

Earlier research reports that 74% of the problems in distributed projects were caused by "communication and contacts" (Komi-Sirviö & Tihinen, 2005).

3. COMMUNICATION MANAGEMENT PRACTICES IN PROJECT TEAMS

Project communication management ensures timely and appropriate generation, collection, dissemination, storage, and disposition of project information. Open and clear communications are required among planners, implementers, and all levels of the organization for project success. It includes having a communication plan, information distribution path, progress reporting, and information sharing system for management and customers (Kwak & Ibbs, 2002). Project communication management should also include methods and techniques to build trust and relationships among team members, as well as propagate desirable personal behaviours and clear communication rules.

Several research findings indicate that, in case of many projects, activities in the field of communication management are disordered, supported mainly by project managers' intuition or neglected (Paasivaara & Lassenius, 2003; Adera, 2013). Research on project communication management in industrial enterprises in Slovakia revealed that in 66% of them no written document (methodology, process steps) to manage project communication has been prepared (Samáková et al., 2013).

The following literature review aims to identify and summarize real-life project communication management practices investigated and described in available readings.

Most of communication management practices identified in this literature review concerned distributed teams. This is mainly due to communication challenges encountered by that type of project teams. These challenges include: distance and lack of face-to-face communication, difficulties with building trust and relationships, time zone differences, cultural differences and lack of common rules, misinterpretation of written text, ignoring communication and lack of communication expectations (Bilczynska-Wojcik, 2014). Sometimes also language skills of cooperating partners are so low, that fluent conversation is impossible, most notably in teleconferences (Komi-Sirviö & Tihinen, 2005).

Bilczynska-Wojcik, in her dissertation, presented communication management practices used in the virtual teams she researched. These included the following (Bilczynska-Wojcik, 2014):

1. direct oral communication: face-to-face communication – used very rarely, mainly because of high costs; videoconferencing – used on a daily basis;
2. managing technology: shared space, where teams can exchange information easily at any time (website, internal messenger, groupware, project tracking software) – used very intensively on a daily basis;
3. communication technology: storing and instant access to project communication and information (wiki-type website, "knowledge centre") – used intensively on a daily basis;
4. asynchronous and synchronous communication – used on a daily basis (IM, GoToMeetings, e-mails, occasionally phone calls);
5. building trust and relationship by encouraging team members to share their feelings and chat informally; using basic rules such as acknowledging a request for information within a particular time;
6. communication management strategies:
 - a. clear lines and responsibilities established within the team up front;
 - b. regular face-to-face meetings with team members – at least through videoconferencing;
 - c. knowledge sharing and access to information for all team members – project information centre (wiki page, shared virtual space);

- d. using the correct medium of communication depending on the task, project stage, individual team member - a responsibility of the virtual team's manager;
- e. virtual water cooler to share informal communication;
- f. communication time schedule – especially for teams in different time zones;
- g. monitoring communication, follow-up and feedback;
- h. building trust by establishing relationships among team members.

The last aspect of communication management strategies is mentioned also by Remidez and Jones, who claim that task-oriented communications that lack relationship building aspects are insufficient to support successful projects (Remidez & Jones, 2012).

A different aspect regarding internal communication in international corporations, which could be also related to project communication in multicultural teams, is mentioned by Apud and Apud-Martinez, who argue that the key to effective cross-cultural internal communication is to develop cross-cultural competence, to make the team aware of the effect of culture on their work and to ultimately develop knowledge and skills designed specifically for a multicultural communication team (Apud & Apud-Martinez, 2008). The same aspect regarding culture influence on project and communication management is mentioned by other authors (Chen & Partington, 2004).

One of the authors, who had practical experience in working with remote teams, proposed seven key communication techniques to help generate respect, trust and motivation in distributed teams. These techniques include (Douras, 2010): keeping promises and responding to employees in a timely manner, setting consistent communication schedules with remote employees, sticking to appointments, providing details and reasons for any requests, asking rather than telling, writing positive e-mails, and asking team members for their advice, opinions and feedback.

Results of yet another survey show significant communication management practices adopted by Singaporean firms in China. The adopted practices include (Ling et al., 2007):

1. having more face-to-face communication than written communication;
2. having high quality communication among team members and communications planning;
3. quick dissemination of information and appropriate generation, collection, dissemination, storage and disposition of project information;
4. good public image and public relations by being sensitive to Chinese values and culture;
5. adoption of a common working language among team members;
6. working with clients, consultants and contractors with whom they had good working relationships in the past.

An extensive research on the usage of numerous communication management practices was also conducted on the example of projects realized in a sugar company in Africa. The findings reveal that the most frequently used practices included: project meeting minutes, project kick-off meeting and project office data capture and storage. Other practices, like project reference materials, meetings for continuous review, progress reports, project meeting schedule and project documentation distribution schedule were executed occasionally. The findings of the study demonstrated a low level of establishment of standard communication maturity practices, what resulted in low project performance (Adera, 2013).

A valuable contribution on communication processes applied and adopted in distributed agile teams is provided by Modi et al. (2012) who list five communication practices supporting distributed agile methods:

1. frequent visits and staff rotation for building trust and team cohesion;
2. building a shared understanding by using various communication channels (shared daily stand-ups, pair programming across locations);
3. providing multiple communication modes (creating 'shared' places) to alleviate the problems associated with geographical distance and give a real-time progress of the project (general purpose tools, knowledge sharing tools, software engineering and project management tools);
4. striving to have similar team composition at different locations to reduce dependency on one location;
5. synchronising work patterns to maximise the overlap and increase the communication bandwidth.

Another research (Xiao et al., 2014) described two types of communication practices – one regarded forms of communication among team members of each of the two cooperating teams, who worked in the same location (communication within the teams), and the other one regarded communication practices realized between cooperating teams (communication between the teams). Practices applied within the teams included:

1. in person, face-to-face communication, which fosters interaction – for internal discussions;
2. e-mail – used mostly for record-keeping and follow-up potential, the importance of the matter, getting other people involved, sending Internet links or files, and sending/receiving background information;
3. phone calls (local communication) – used when off-site, after working hours;
4. regular team meetings;
5. instant messaging – used sometimes in one team, not allowed in the other team.

Communication between cooperating teams generally followed a need-based approach in both teams (no planned procedures were followed) and was realized using the following practices:

1. meetings;
2. phone calls (although a bit impractical due to 12-hour time difference) – for urgent situations;
3. e-mail (which was associated with a one-day delay in receiving response);
4. chatting (occasionally);
5. conference calls;
6. database – for sharing blueprints.

The authors of the research conclude that their findings indicate that members' preferences and practices of communicating with other teams have not embraced modern groupware technologies.

An interesting research concerning application of media synchronicity theory for matching media capabilities and communication process needed in a given task, provides yet another context for communication management practices. The media synchronicity theory recommends the use of multiple communication media when performing a task, because a single communication media is often unable to both convey information and converge knowledge and most project tasks involve both conveying information and converging on shared meanings. In the studied projects the following communication and collaboration tools were used (Niinimäki et al., 2012):

1. internal messenger – used a lot due to numerous advantages: informality, high synchronicity, multitasking ability, supporting both synchronous and asynchronous communication;
2. audio conferencing – commonly used although challenged by poor sound quality and language skills – immediate feedback, higher symbol variety than with text-based media;
3. one-to-one telephone calls – seldom and regarded as non-effective, intrusive, interruptive, costly;
4. video conferencing – acknowledged although rarely used, supporting strong social presence;
5. email – dominant communication medium in all projects, low immediacy of feedback, low symbol variety but high level of parallelism, rehearsability, and reprocessability;
6. issue trackers – structured asynchronous communication and collaboration.

The last example presenting communication management practices concerns a global software development Extreme Programming (XP) team, employing communication-rich methodology. On the basis of a systematic analysis of their findings, the authors suggest four success factors for globally-distributed XP projects working in a new problem domain. These practices include (Layman et al., 2006):

1. invaluable role played by the development manager, who acts as a communication bridgehead between the two groups and plays the advocate of both groups on a daily basis (having a key member of one team physically located with the other team);
2. importance of short, asynchronous communication loops that can serve as a sufficient surrogate for synchronous communication;
3. identifiable (well-defined) customer authority, which is necessary to manage and resolve requirements-related issues;
4. high process visibility which is important for the customers to guide the project effectively while the developers are working on a new and unfamiliar problem (continuous access to process and product information).

Table 1 summarizes the communication management practices identified through the literature review, grouping them into four categories: strategic, informational, emotional, and practical, depending on the main goal of a given communication practice.

Table 1: Summary and categorization of the communication management practices.

Communication management practice category	Communication management practice
strategic (connected with communication planning and project environment)	clear lines and responsibilities established up front
	cross-cultural competence
	high quality communication planning
	good public relations on behalf of the external team in the country of project realization
	adopting common working language among team members
	well-defined customer authority
	high process visibility for the customer
informational (regarding generation, collection, dissemination, storage, and disposition of project information)	“shared virtual space”/“project knowledge centre” – website/Wiki, groupware, project tracking software
	instant messenger, e-mail, GoToMeetings
	traditional phone calls
	communication time schedule (especially for teams in different time zones)
	using various communication channels (for better convergence)
emotional (concerning the building of trust and relationships)	regular face-to-face communication, at least with the use of audio- or videoconferencing (often hindered by technical problems or low language skills)
	encouraging team members to share feelings and chat informally – use of social media (‘virtual water cooler’)
	kick-off meeting, review meetings, stand-up meetings (kick-off should be a face-to-face meeting, other can be IT supported)
	more face-to-face communication than written
	frequent visits and staff rotation
	asking team members for advice, opinions, feedback
practical (connected with clear and positive communication and behaviour rules)	using basic communication rules (i.e. specifying time for sending reply, keeping promises, providing details and reasons for requests)
	desirable behaviour and personal attitude (sticking to appointments, asking rather than telling, writing positive e-mails)
	similar team composition and work patterns at different locations
	having a key member of one team physically located with the other team
	short, asynchronous communication loops

Source: own elaboration

The purpose of introducing the communication management practices categories is to underline the multiple roles which these different practices play in project management and that within each category there are numerous ways to support communication management.

4. CONCLUSIONS

The main goal of the literature review of communication management practices performed within this work was to summarize available practical findings associated with this area of study, and subsequently use this information in future research to develop a method of selecting the project communication management patterns most appropriate to the characteristics of a given project, the team and its environment. To the best knowledge of this author, no similar literature review of real-life project communication practices has been conducted so far.

An important conclusion emerging from this literature study is that ensuring proper and effective project communication it is not only a matter of preparing a communication plan, creating, collecting, distributing, storing project information, and identifying responsibilities for project team members and

other project stakeholders (i.e., activities related to the strategic and informational categories of communication practices), but also of having good personal contact with team members, developing positive relationships and obeying fundamental rules of clear and positive communication (i.e., activities related to the emotional and practical categories of communication practices).

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