Enhancing the Effectiveness of Virtual and Offshore Project Teams: Guidelines for Best Practice

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Abstract

The literature on management of virtual and offshore project teams contains numerous examples of the ways in which such projects can fail. Typically, the failures relate to one or more of the three cornerstones of project management: the time frame is not adhered to; costs exceed the budget; the quality of the end product does not meet expectations. In most cases, both the cause and the solution lie in human rather than technical factors. This short paper, based on a literature survey and the author's own experience of working with an offshore e-learning content producer, offers a list of guidelines for managers of virtual and offshore project teams to help them avoid the most common pitfalls and reap the benefits of global collaboration.

1. Introduction

Boeing's 787 Dreamliner, which is scheduled to enter into service next year, has involved more than 50 partners operating in over 130 locations, who have worked together for more than four years. According to MacCormack and Forbath [28], Boeing is a model of the new enterprise: the enterprise that gains exceptional competitive advantage by their ability to leverage the expertise and knowledge of myriads of global partners. Many firms in a wide range of industries have come to the same conclusion [5], and are learning about the joys and frustrations of globally distributed teams by trial and error; however, the ever-increasing body of literature on virtual teams contains a wealth of advice for virtual project managers and team members.

The guidelines below focus on best practices for project teams – teams that have to deliver something within a specified period of time - that are either geographically distributed (i.e. virtual teams) or split between two locations (i.e. an "onshore" team that generates the project brief, and an "offshore" team that delivers accordingly). The guidelines are divided according to the phases of a typical project lifecycle.

2. Pre-Project

Establishing the team:
- Aim for diversity in team composition. Heterogeneous teams are often more creative and productive in the long term, although they require more sensitive leadership [18].

Getting to know one another:
- It is essential to establish social presence early in the process. Face-to-face meetings at the start of a project are ideal if possible [5, 7]. At the very least, team members should be encouraged to share personal details and spend time getting to know one another as people, not just as workers [5].

- Ensure that all team members know who is in the team, and are aware of each other's roles [7, 13, 21]. Awareness of other team members' skills will increase the likelihood of interdependence and a more successful project outcome, and will also reduce the effort needed by the team leader to co-ordinate tasks and resources [18].

Team training:
- Provide basic teamwork training, and invite team members to discuss netiquette rules and the possible drawbacks of electronic communication at the start of a project. The heightened awareness arising out of such discussions can lead to greater team cohesion and improved results [4].

- Determine the technology requirements at the start and ensure that all members have appropriate equipment, and are trained to use it. If this is not done, it can very quickly lead to project delays [18].

Special notes on preparing for work with offshore project teams:
- Recognize that, despite the promise of reduced overall costs, there will be far greater management overheads than in a project operated entirely with local staff [1].

- At the Request for Information (RFI) stage, ask questions about the outsourcing company's culture, business strategies, human resource policies, service philosophies and quality assurance initiatives, in order to identify partners with the best match [24].

- It may be helpful to include in the contract a clause providing for a bonus fee to the offshore partner for any new customer acquired after the product is developed. This will provide an extra incentive for the offshore team to be innovative and to produce a high quality product [24].

- Be aware that projects in which some work is allocated to offshore partners can be fraught with problems, due to the feelings of insecurity that may arise in project managers at the "home office" at the prospect of job losses, and the perceived increased risk to the project by allowing outsiders to take on critical responsibilities [24].

- It is essential, especially in the case of a new project, to build in structured training opportunities

for the offshore team in order to save time and resources in the long run [2].

- Challenges in communication are usually most pronounced at the requirements development stage [35]. This is also the stage where most defects occur [19]. Therefore it is critical to clarify requirements accurately at this stage, and also to build in early prototyping to the schedule.

3. Getting started on the project
In the project initiation stage it is necessary to clarify expectations as much as possible. It may be useful for the team to formulate a "Team Operating Agreement" [33], based on discussions around the following:

- Clear goals, benchmarks and visions [9, 18]: all team members must be involved in the goal setting process. The more dispersed the team, the more important this is [11].

- Clearly defined roles and an indication of what is expected of each team member during each stage of the project: this is especially important in virtual teams, where there are fewer informal discussions than in teams working in the same location [7, 40].

- Agreement on how the work is to be organized: this helps to build trust among team members [12]. Virtual teams in which members formalized their process structures were found to outperform teams which focused only on results [32, 39].

- Time zones: to mitigate the negative effects of different time zones [26], identify suitable times at which everyone can be called, and rotate time frames for synchronous meetings so that the same people are not always inconvenienced [23].

- Communication protocols: e.g. what and when to communicate, and also how, and whom to copy. If these matters are not agreed on at the start of the project, team members may soon find themselves overwhelmed by the volume of communication from other members [5]. Successful teams also have "routines of conversation" that they all follow, such as checking into the team's project management site five times a week [10, 18].

- Decision-making protocols: protocols for problem-solving, sharing information, respecting confidentiality, etc. [33].

4. During the project
There is overwhelming data from the literature to show that, if virtual teams are to perform effectively, trust amongst members is critical [5, 8, 12, 16, 18, 20, 25, 31, 34, 36]. Another common theme is the importance of good communication between team members and the recognition that communication, particularly in multi-cultural virtual teams, can be fraught with difficulties [5, 16, 18, 35]. Many of the guidelines above address the need for effective communication at the start of a project.

Further guidelines for developing trust and healthy communication patterns:
- Encourage collaboration across functions and do not allow the team to split into closed sub-groups or silos [13].

- Because much of the communication in virtual teams takes place through writing, there is often the perception by team members that more formality is required. More e-mails may be written and more people may be copied than would be the case in co-located teams, and this can result in minor disagreements being blown out of proportion. The team leader needs to act quickly and deal with potential conflicts or sensitive issues to stop them from spiralling out of control. It is advisable to use the phone in such situations, since continuing the conversation in writing can further exacerbate the situation [7].

- Foster cultural understandings – deal with cultural issues openly [18]. Recognize that people from different cultures are likely to see things differently. E.g. people from collectivist cultures are likely to seek consensus and compromise more readily than people from individualistic cultures [14, 17].

- Teams that have challenging conversations in which they explore new ideas and discover new knowledge are more engaged and successful than teams that merely share information [30].

Other essential leadership tasks:
- Re-state the goals frequently to the team, to ensure that members don't lose focus or inadvertently change or misinterpret objectives [7]. Intermittent reviews of team boundaries (i.e. who is in the team, including updated photos, video profiles, synchronous chats, etc.) and shared mental models will also help to reduce the possibility of unhealthy splits [18].

- Regular communication between the team leader and each individual in the team is essential for ensuring that people stay on track [23]. Virtual team leaders also need to continually monitor whether all the team members understand all the relevant concepts, and whether the required information is being shared [9].

- Celebrate the achievement of interim deadlines [12] and recognize the contributions of individuals publicly [41].

- Encourage experimentation. This empowers team members and leads to better results [3].

- In the case of offshore project teams, it is important not only to monitor the team's progress, but also to frequently check that the company as a whole is still focusing on the same products and services as when the contract was signed, their facilities are up to date, and that a personal relationship is being maintained with key people [15]. It may also be a good idea to commission a team to work closely with the outsourced team, ensuring that the mission and vision of the project are maintained, and channelling feedback on progress to the outsourced team [24].

Handling technology throughout the project:
- Use a range of technologies [22] – e.g. discussion forums, wikis, VoIP, project information databases, as appropriate. Teams that have choices in which technology to use for the purpose at hand are more successful than teams that are limited to one technology [6]. Teams that are open to experimentation with technology have also been shown to be more efficient [10].

- It is essential to provide good technical support for team members. One way of doing this is to identify early adopters of new tools and technology, and encourage them to teach others in the team [3]. These individuals act as "technology stewards" for the team [37]. Although they may take on this role accidentally at first, their efforts can make a significant difference to the success of the team and should be supported in whatever ways possible [38].

- Technology for brainstorming should allow each participant to write their own contributions without being "filtered" by a facilitator. For consensus-building, a technique in which participants can comment on each other's proposals using a polling system (e.g. Agree, Disagree, Discuss or Pass) can be highly effective [32].

- Any type of collaboration technology that encourages users to categorize information and to make explicit judgments about the importance of information can lead to better quality decisions and more satisfied users [29].

- Technology can also be effectively used to enable a range of collaboration patterns, such as breaking a group into sub-groups to discuss aspects of a project. This has been shown to improve decision-making [27].

5. Project wrap-up
- In the final stages of the project, discuss thoroughly with team members the lessons learnt - especially what went wrong and what improvements they would make in future projects, and make a detailed record for future reference.

- Finally, celebrate the team's successes, including unexpected discoveries, effective collaboration as well as achievement of the project goals [18].

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