CityUniversity
of Seattle

LEADERSHIP IN A PROJECTISED WORLD: HOW CAN CROSS-CULTURAL, GLOBAL VIRTUAL TEAMS PERFORM SUCCESSFULLY?

By

MELPOMENI G. XANTHOU

A THESIS REPORT
Presented to the Project Management Program in the
School of Management of
City University of Seattle
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE OF PROJECT MANAGEMENT

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This Master Thesis was elaborated in the frame of the collaboration of the City University of Seattle and the Graduate Technological Education Institute (T.E.I.) of Piraeus to fully implement at TEI of Piraeus Campus the CU's MS in Project Management Program approved by the Hellenic Ministry of National Education and Religion Affairs as by decision E5/58291 published in the Hellenic Government Gazette (FEK) B/924/5- July-2005.

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Dedication

To my family and my supportive and motivating friends.

Acknowledgments

Abstract

Globalization is more than out-sourcing and leading global virtual cross-cultural teams for delivering desirable results. The purpose of this thesis is to present the aspects that affect global project performance such as cultural diversity, geographical dispersion, time zones and the challenges that these projects face as well as the skills that a successful global Leader should have.

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Introduction

Nature of study

Organizations until many years before, considered Project Manager as the person that just executes a project based on technical skills. Domestic projects were and still are planned, controlled, executed and closed following specific procedure. But business change, markets change, political environments change and the need for leading global projects has become real.

What needs to be considered is that domestic and global teams and consequently global projects, although they have common elements, cannot be managed in the same way. Not only technical skills are demanded but soft skills also. Project manager in global virtual teams must in fact be a Leader. He/she has to create suitable communication channels by using technology means, to fully understand and respect cultural diversity among team members, to overcome time zones and distance and finally be able to inspire and motivate team members without having face-to-face communication.

The author through bibliography research will try to point out all the necessary skills that a Leader should have in leading global virtual, cross-cultural teams and the indispensability of having soft skills in order to deliver successful projects.

Needs assessment

This thesis will provide an academic research to organizations that overtake global projects and deal with global virtual, cross-cultural teams in order to make them understand the different skills that a Leader of those projects should have.

Specifically the thesis will provide the following views:

- A summary of academic research regarding the soft skills a Global Leader should have
- A summary of academic research concerning the correlation of Emotional Intelligence and Leadership
- A summary of academic research regarding the importance of communication in virtual teams.

Problem statement

Global virtual, cross-cultural project teams are disadvantaged by cultural and communication limitations. Therefore it is very important to see how a leader can drive those teams to success.

Rationale

Communication in virtual teams is the key to project success especially when referring at global projects. Application of formal Project Management techniques is necessary in all fields and in all project's life cycle phases. Concerning communication, specific formal processes

should be followed with respect to the time zones. At this case excessive written communication could not be effective.

What creates problems in that kind of projects is that companies consider Project Managers and Leaders of equal role and responsibility. Lack of training in global leadership skills and lack of soft skills can create insuperable problems to global projects.

Organizations need to understand that working with global virtual, cross-cultural teams is not an easy case and that those teams need different management than teams that are located in the same building and have the advantage of daily association. What also needs to be considered is that leading those teams does not requires only technical skills but soft skills also with emphasis on Emotional Intelligence.

Conclusively it is of crucial importance for a Leader to be able to manage his/her own feelings and others and behaviors of people that are geographically distributed and need to be cooperative, adherent to project tasks, motivated and inspired only through communication means.

Objective

Represent how leadership can successfully overcome cultural diversity, distance, time zones and communication obstacles in global projects and how Emotional Intelligence can be a determinative factor in projects' success.

Review of Literature

    Globalization, need for speed and continuously changing markets, have made virtual teams a common reality not to mention that these kind of teams could even overcome traditional project teams. Globalization and technology development have made work more complex and thus employees have become dependent in terms of cooperation for tasks completion and successful project delivery (Halverson & Tirmizi, 2005). Furthermore, according to Suutari (2002) globalization constitutes a crucial factor for organizations in order to align strategies, leader's and manager's skills with market and business needs.

    People have been used to working in specific location, with specific rules and specific colleagues. Nowadays, that younger generation raise with technology evolution, people will become more comfortable working in virtual environment.

    "The various communication technologies have created a new context for leadership and teamwork" (Avolio, Kahai, Dumdum, & Sivasubramaniam, 2001a). In this context, leadership has been defined as "a social influence process mediated by advanced information technologies to produce changes in attitudes, feelings, thinking, behaviour, and/or performance of individuals, groups, and/or organizations'' (Avolio, Kahai, & Dodge, 2001b).

    Suutari (2002) argues that organizations and Leaders must know which the necessary skills are for leading a global

virtual team otherwise this can be the most important obstacle in these teams' creation and effective performance. Besides, leading global virtual teams is not an individual issue which concerns only the Leader but organizations are also part of the global Leader development process.

According to Jones, Oyung & Pace (2005) the term virtual team refers to a team which is comprised of geographically distributed members that cannot frequently meet face-to-face, that work together to deliver a specific project and often disband since the project has finished. Additionally, according to Driskell, Radtke, & Salas, (2003); Thompson & Coovert (2003) virtual teams are comprised of individuals that work across time, physical position and organizational boundaries. Another definition about global virtual teams is that these teams are "technology-mediated groups of people from different countries that work on common tasks" (Dekker, Rutte, & Van den Berg, 2008).

According to Kayworth and Leidner (2000) what lead to the creation of virtual teams was the need to reduce expenses, the improvement of cycle time and the retention of needed employees only in organizations. That way, there is no need for relocating employees with specific expertise around the world depending on a project's needs. Additionally, "virtual teams allow organizations to unify the varying perspectives of different cultures and business customs to avoid counterproductive ethno-centric biases" (Solomon, 1995)

"The key to establishing an organizational culture that promotes virtual teamwork is that managers and virtual team leaders at all levels must be open to change and must support virtual teamwork" (Duarte & Snyder, 2001).

Transformational and Transactional leadership

Transformational and transactional leadership are two of the several theoretical approaches to the study of leadership. Transactional Leaders are based on the punishment and reward system whereas transformational Leaders are based on influencing, motivating and inspiring followers to perform their best. (Bass & Avolio, 1993)

According to Purvanova & Bono (2009) Transformational leadership in comprised of four dimensions; idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. Although virtual teams are more difficult to be managed, the task-oriented and to the point communication due to lack of time and physical presence, allows transformational leadership to be applied with desirable effects. Additionally, it has to be pointed out that not all teams can be leaded with one specific way. Instead, every team type has to be leaded in a proper way depending on whether the team is virtual or face-to-face.

"Transformational leaders are skilled at increasing and broadening follower interests, gaining commitment to the goals and mission of the team, and motivating people to go beyond

their self-interests for the good of the team" (Den Hartog & Koopman, 2001). Virtual, global teams that are consisted of people with different ideas, different way of working and different culture would be effective if leaded by a transformational Leader.

In other words "leaders are charismatic when they inspire devotion and loyalty, display a strong commitment to ideals and emphasize the importance of a collective mission" (Purvanova & Bono, 2009). Virtual team members at the beginning of a project have not developed strong relationships yet. But this is a challenge and an opportunity for global Leaders. The reason is that "leaders who operate under weak, uncertain situations have a greater chance to appeal to and engage followers' self-concepts, values and identities (Shamir & Howell, 1999), as well as to set inspiring goals, allay followers' concerns, generate confidence, and motivate performance (Waldman & Yammarino, 1999).

Global virtual teams

Dekker et al. (2008) state that virtual teams can not be effective unless attention is paid to team member's behavioral charecteristics. He continues saying that in virtual teams it is very important to concentrate on behaviors that affect team performance. These characteristics that affect team effectiveness and successful performance were summarised in 14 categories (Tab. 1)

Category label	Interaction Behavior
Media use	Effectively matching the media to the task and effective use of media
Handling Diversity	Taking into account language, time zone, and cultural differences when interacting and behaving accordingly
Interaction volume	Communicating short, to the point, and only when necessary
In-role behavior	Taking task and goal of the team seriously and complying with obligations
Structuring of meeting	Planning and structuring of meetings
Reliable interaction	Being predictable in behavior and responsive to messages of team members
Active participation	Showing active participation in meetings by contributing and listening
Including team members	Including and inviting team members for contribution
Task-progress communication	Communicating deadlines, actions, and progress of a task to the team
Extra-role behavior	Showing pro-social behavior towards team members
Sharing by Leader	Sharing of information and decisions with the team by team Leader
Attendance	Being involved in the meeting and not showing up late or not at all
Social-emotional communication	Talking about non-task-related subjects
Respectfulness	Behaving in accordance with the hierarchy of the team

Table 1: Categories of interaction behavior in virtual teams and how team members should behave per category.

According to Hofstede (1980) there are some cultural factors that lead to team member sensitivities on a global team. These factors are "power-distance, uncertainty avoidance, individual-collectivism, and long term-short term orientation" (Hofstede, 1980).

"Power distance refers to the power distribution within an organization and the extent to which the less powerfull members of organizations accept that power is distributed unequally" (Martinelli, Rahschulte, & Waddell, 2010). For example United States, Great Britain, Germany and Switzerland have low power distance culture which means that people consider everyone to be equal independently of the formal position. Additionally, subordinates have the right to be part of the decision making process and are free to criticize superior's decisions. On the other hand, countries such as Singapore, Brazil, India and China have high power distance culture which means that there are hierarchical relations where in this case subordinates just accept decisions that are made from superiors (Martinelli, Rahschulte, & Waddell, 2010).

Power distance acceptance is very crucial for global virtual teams where team members are culturally diverse and this is Leader's responsibility to be culture aware of his/her team members and be able to promote healthy collaboration among them (Martinelli, Rahschulte, & Waddell, 2010).

"Uncertainty avoidance reflects the extent to which members of a society attempt to cope with uncertainty. Uncertainty avoidance may affect the ways in which team members carry out their tasks autonomously" (Martinelli, Rahschulte, & Waddell, 2010). For example team members from high uncertainty avoidance cultures such as Japan, Belgium, France, Brazil and Italy are not comfortable with indefinite roles and inarticulate goals. On the other hand, team members from low uncertainty-avoidance cultures such as United States, Great Britain and Singapore are comfortable with ambiguous situations and are not afraid of taking risks (Martinelli, Rahschulte, & Waddell, 2010).

Again, Leader's role is very important because he/she has to carefully assign tasks in team members depending on their culture and their level of uncertainty avoidance (Martinelli, Rahschulte, & Waddell, 2010).

"Individual collectivism refers to the degree to which team members of a culture prefer to act as individuals rather than as members of a collective group" (Martinelli, Rahschulte, & Waddell, 2010). Countries such as United States, Australia, Great Britain, Italy, France and Germany have high individualism cultures. People from these countries feel comfortable whether working alone or being part of a team. Contrary, people from Asia and Latin America are focused on team collaboration which is their first priority with their

own needs coming second (Martinelli, Rahschulte, & Waddell, 2010).

Leader has to be able to create balance between the team members in terms of expectations of the team, personal expectations and rewrds and recognition expectations (Martinelli, Rahschulte, & Waddell, 2010).

"Long versus short-term orientation describes a society's time horizon or the importance attached to the future versus the past and present" (Martinelli, Rahschulte, & Waddell, 2010). In long-term oriented cultures are characterized by adhesion, thrift and sense of humbleness. On the other hand, short-term oriented cultures are characterized by speed and quick results and respect to tradition (Martinelli, Rahschulte, & Waddell, 2010).

Challenges faced by virtual teams

The truth is that virtual teams face many challenges including cultural issues, location matters, communication issues, different time zones and language trammels. According to Jones et al. (2005) there are seven myths concerning virtual teams which are the following:

"It's always better to meet face-to-face" (Jones, Oyung & Pace, 2005)"Virtual meetings can be superior to face-to-face in terms of cost savings, travel avoidance, flexibility, rush-hour avoidance, and not judging someone on how they look" (Jones, Oyung & Pace, 2005).

"If it is really important, you *must do it face-to-face*"

This myth refers mostly to negotiations. A face-to-face negotiation is not necessarily more successful than one done in virtual circumstances. What matters in these circumstances is trust that has been built up among all parties that can lead even virtual negotiations to success.

"*Technology will solve all problems*" (Jones, Oyung & Pace (2005). Communication and operation of virtual teams depends on technology. But only technology does not ensure high virtual team performance and consequently a project's success. There are several reasons that contribute to virtual team effectiveness except from technology.

"You can't climb the corporate ladder unless you are physically there" (Jones, Oyung & Pace, 2005).

According to Jones et al. (2005), this myth can be more harmful for a company's regular employees rather than for virtual ones. The reasons are that the last years more and more companies undertake global projects and work with virtual teams and the other reason is that sometimes employees that meet face-to-face with their superiors are more exposed and consequently must be careful in terms of communication and marketing.

"Virtual communities are ineffective"(Jones, Oyung, & Pace, 2005).

Virtual teams are indissoluble connected with technology. That means that real time conversations are part of this

connection. "Daily contact is kept with geographically
dispersed teams through instant messaging, which provides both
a real time communications vehicle and valuable presence
information" (Jones, Oyung, & Pace, 2005).

"There is a center of the universe and everything must
resolve around it" (Jones, Oyung & Pace, 2005).

According to Jones et al. (2005) many large companies
until 1990s was forcing their employees to move in other
countries motivating them with several benefits. This method
turned out to be inefficient because companies increased their
expenses due to employees movement and potential
organizational changes could result to frequent employees
movements and thus to employees dissatisfaction. These were
the basic reasons that companies applied the virtual team
model.

"We need to focus on helping those few people who will be
remote"(Jones, Oyung & Pace, 2005).

According to Jones et al. (2005) all team members should
be treated in the same way. If co-located team members are met
in a conference room then virtual team members should not only
be part of this meeting via telephone. The point for virtual
team members is to feel part of a team and all meetings should
be held virtually.

Recapitulating, challenges that global, virtual teams face
are summarized in four categories which are communication,

culture, technology, project management (leadership)
(Kayworth & Leidner, 2000)

Necessary skills for leading virtual teams

Effective Leadership is based on some specific skills whether referring to a domestic team or a virtual one. Blank (1995) argues that there are Nine Natural Laws for being an effective Leader.

The first Natural Law is about "having willing followers and allies" (Blank, 1995). Managers and Leaders are responsible for leading teams or people generally. Employees or team members follow Manager's instruction because they have no other choice and have to deliver specific tasks. On the other hand, Leaders should have willing followers and "leadership should be seen as the power that galvanizes human energy and translates it into action" (Blank, 1995).

The second Natural Law is that "leadership is a field of interaction" (Blank, 1995). Effective leadership does not happen accidentally. Moreover, does not happen in an isolated environment where everyone is sovereign and works alone. As it has been mentioned above, market needs require work group in order to achieve desirable effects (Blank, 1995).

The third Natural Law argues that " leadership occurs as an event" (Blank, 1995). There are many people that are afraid of uncertain and steamy situations and do not want to interfere. What differentiates Leaders is their ability to

consider these situations a challenge and identify development signals where others see only problems (Blank, 1995).

The fourth Natural Law states that "leaders use influence beyond formal authority" (Blank, 1995). What really matters here is the fact that leadership must not be excersided through position authority but through substantial, convincing and creative influence (Blank, 1995).

The fifth Natural Law is about "operating outside of the boundaries of organizationally defined procedures" (Blank, 1995). Managers work in organizational framework which is comprised of boundaries and specific prosedures. Leaders on the other hand, when realise that something is not working as it should be, they are prompt to change procedures and try something totally different in order to reach success. Leaders are supposed to have different perspectives and work across boundaries when necessary (Blank, 1995).

The sixth Natural Law states that "leadership involves risk and uncertainty" (Blank, 1995). As it has been mentioned above, Leaders many times need to act in an uncertain environment. When acting outside safe boundaries, risk is unavoidable but Leaders should take risks and make them opportunities (Blank, 1995).

The seventh Natural Law refers to the fact that "Leaders should often take a court of action without the benefit of unanimous approval" (Blank, 1995). Sometimes decisions need to be taken quickly. Leaders cannot wait for everyone's

agreement especially when they have to deal with big and complex teams. Time is determinative and of crucial importance in many cases. So, sometimes it is inevitable to take the risk and proceed without unanimous agreement (Blank, 1995).

The eighth Natural Law "is consciousness in terms of the Leader's capacity to process information" (Blank, 1995). This Law depends on intention, attention, discrimination and initiative. It is about intention for dealing with risky situations, attention to stay focused on the tasks that must be executed rather than thinking what should be done and was not and having the ability to use information that is not always seen. Discrimination is about identifying what is really important in terms of information and data collection. Finally, initiative is about being realistic, humble and able to fully comprehend that a Leader can not do everything by his/her own but certainly something is much more than nothing (Blank, 1995).

The ninth Natural Law refers to the fact that "leadership is a self-referral process" (Blank, 1995). Everyone has frames, values and beliefs. What really matters is if these characteristics are used in a suitable way when facts occurs and are transformed in opportunities (Blank, 1995).

According to Martinelli, Rahschulte, & Waddell (2010) the core principles of team Leadership are as follows:

Creating a common purpose

"The team Leader's job is to establish the common purpose and to inspire the team to work collaboratively to achieve goals that define the purpose. It is the ability of the team Leader to create a common vision and the team's willingness to adopt that vision that defines a group of people as a team" (Martinelli, Rahschulte, & Waddell, 2010).

Establishing team chemistry

"A project team may consist of top talents, but they will not reach a high level of performance without a certain bonding of spirit and purposefulness…There are a number of thing that successful global team leaders do to accelerate the establishment of team chemistry including establishing team norms, fostering social presence, using information-rich communication technologies" (Martinelli, Rahschulte, & Waddell, 2010).

Building and sustaining trust

"Trust withing a team is the foundation of effective collaboration. For a team to reach its highest level of performance, much attention has to be paid to building trust between the team members and the leader, sponsors and other stakeholders" (Martinelli, Rahschulte, & Waddell, 2010).

Demonstrating personal integrity

"For the global team Leader, integrity is rooted in two foundational elements: values and vision. Values are what you stand for, and the team needs to see demonstrable proof of

your values in action. Vision is clear and state of where you are taking the team" (Martinelli, Rahschulte, & Waddell, 2010).

Empowering the team

"The most effective Leaders are those who are willing to share their power with members of their team who can make the most positive impact. Team members will take on a greater sense of responsibility for their work output, become more comfortable with making decisions and solving problems on their own, begin to act proactively instead of reacting to change, and ultimately become more motivated to succeed" (Martinelli, Rahschulte, & Waddell, 2010).

Driving participation, collaboration and integration

"Success of the team Leader is dependent upon how well he or she facilitates the alignment of interests and the work activities…The role of the project Leader becomes one of initiating and driving continuous, cross – team collaboration" (Martinelli, Rahschulte, & Waddell, 2010).

Communicating effectively

"As the voice of the project, the team Leader must be an effective communicator to ensure that all pertinent stakeholders have the right information at the right time to work at their highest levels of productivity…Both senders and receivers of information should have a shared understanding of the messages and contexts of the messages being conveyed" (Martinelli, Rahschulte, & Waddell, 2010).

Managing team conflict

    "It is impossible to maintain a conflict-free team
environment, as conflict is a way of life when people work
together. The global team Leader must be hyper-vigilant in
identifying conflict between team members, because conflict
cannot be resolved if it is not identified" (Martinelli,
Rahschulte, & Waddell, 2010).

Making tough decisions

    "There can be thousands of decisions that a team Leader
will encounter during a project. To prevent even a small
number of these decisions from being barriers to progress, a
team Leader needs to be proficient in collecting all necessary
facts, analyzing the pertinent data and then driving to a
decision" (Martinelli, Rahschulte, & Waddell, 2010).

Providing recognition and rewards

    "To effectively provide recognition and rewards,the global
team Leader must take stock in the things that they have
direct control over and employ them consiously, cautiously and
consistently" (Martinelli, Rahschulte, & Waddell, 2010).

    According to Martinelli et al. (2010) a global and thus
virtual Leader except from the aforementioned skills should
have some more skills such as influencing skills,
prioritization skills, symphonic and system skills, and be
political savvy.

Influencing skills

Global virtual teams do not have direct connection with their Leader. This results to the need for a Leader to influence the actions of the team members. Influence is very important because influencing means having followers, inspiring team members to be co-operative in order to complete all tasks and deliver successful projects and be supported by team members.

Prioritization skills

Everything in life depends on balance and prioritization. According to Martinelli et al. (2010) a crucial point for success is about balancing priorities. They continue saying that prioritization should be elaborated according to the factor that is considered to be the highest priority for a project; for example financial, environmental, technological constraints.

Symphonic and system skills

According to Martinelli et al. (2010) symphonic and systems skills in other words is systems thinking. The global Leader should be able to see a big picture and not separate elements and should be also to discriminate interconnections among fields that seem irrespective.

Political savvy

"Organizational politics originate when individuals drive their personal agendas and priorities at the expense of a cohesive corporate agenda" (Martinelli, Rahschulte, & Waddell,

2010). The global team Leader should be able to fully comprehend that politics are integral part of every organization and he/she should lead within specific framework. According to Martinelli et al. (2010) projects should be managed in an effective way meaning that the best way to do this is influencing and not maneuvering. In fact, the Leader should work on protecting projects from every factor that could have negative impact to the project.

According to Halpern & Lubar (2003) the acronym PRES represents the skills that a Leader of global, virtual teams should have. P means Being *P*resent, which is about know everything that happens, R stands for *R*eaching Out by paying attention to what others say and creating real, honest relationships. E means *E*xpressiveness, which means using the right words and the proper tone to express messages clearly without letting fringe for misunderstandings. S means Self-knowing, because self-awareness is very important, having strong values and be able to serve them and influence people to believe and follow you.

Role of technology in global virtual teams

Nowadays, technology has become integral part of business and life. Companies and organizations around the world became able to overtake global projects by using several means of technology. But technology is not panacea. Contrary, it should be adapted to the needs.

Global teams face many challenges; from sharing a common vision to communicating effectively. In the framework of communication among distributed team members, technology is a very important tool. Unless technology existed, referring to audio, video and other means, global projects would have no chance to meet success.

In global virtual teams generally, technology is used to eliminate distance and time. What should be first done is the determination of how a team will communicate. Technology can not lead to success unless it is used in the proper way.

"Two commonly used theoretical frameworks for comparing the effects of different communication technologies are media synchronicity" (Dennis & Valacich,1999) and "media richness" (Daft & Lengel, 1986). Media synchronicity refers to synchronous and asynchronous communication, which is about real time communication (teleconference) and communication in different time (e-mail) accordingly.

Media richness theory refers to how communication media affect the task performance and thus project's performance (Daft & Lengel, 1986). "A rich medium allows for transmitting multiple verbal and nonverbal cues, using natural language, providing immediate feedback, and conveying personal feelings and emotions" (Daft & Lengel, 1986).

There are several kinds of communication media such as videoconferencing and text-based communication that can be used by virtual teams. Chat belongs to text-based

communication and allows to team members to carefully choose the proper words. Additionally, this communication type allows to the users to communicate in real time and exchange information and ideas without loosing time (Griffith & Neale, 2001). Videoconference has become one of the most common communication method for virtual teams that its members are geographically dispersed (Bell & Kozlowski, 2002; Spreitzer, 2003).

According to Jones et al. (2005) some of the tools that help virtual teams in day-to-day communication are the following:

- Audioconference
- Instant messaging
- E-mail / voicemail
- Meeting management tools (Netmeeting, etc.)
- Desktop and room-based video.

According to Martinelli et al. (2010), there is a technology selection strategy that takes into account four primary factors as follows:

Team interactions

- conversational interaction; free exchange of information
- transactional interactions; exchange of requirements document, project plan etc
- collaborative interaction; more than two team members are working together for a specific task, goal or deliverable

Concerning team interactions, Cooke and Szumal (1994) argue that they are categorized in constructive and defensive style. A constructive interaction style is based on cooperation, information exchange and focus on the team's outcomes. A defensive interaction style is separated on two categories, aggressive and passive behaviours. What really matters in this case is that personal agendas are above a cooperative project team and successful projects.

Communication and collaboration methods

- synchronized communication; it is about interactive communication among team members and is a method used for decision making, brainstorming and generally for activities that should be conducted in synchronized time
- asynchronous communication; communication among team members that are not present at the same time. This method is preferable for data and information exchange that is not an ad hoc issue.

Synchronous communication includes "desktop and real-time data conferencing, electronic meeting systems (EMS), electronic display, video conferencing and audio conferencing" (Duarte & Snyder, 2001).

On the other hand, asynchronous communication includes "e-mail, group calendars and schedules, bulletin boards and Web pages, non-real-time database sharing and conferencing and workflow applications" (Duarte & Snyder, 2001).

Contextual differences

- physical infrastructure; refers to basic utilities such
  as electrical power, telephone and internet. The
  availability or not if these utilities determines the
  communication media that will be used

- culture and language; culture is a crucial factor for
  determining the communication and collaboration
  technologies depending on how comfortable are people
  with the use of technology

- time zone boundaries; geographically dispersed team
  members is a challenge for the technology media choice
  due to the fact that they have different working hours

- team size; is a determinative factor because a
  complicated technology media may be ineffective for
  small teams and a simple technology media may be
  ineffective for large teams

Team tasks

- low complexity tasks; are those that can be completed
  with limited co-operation among team-members

- high complexity tasks; are those that without high
  degree of co-operation and information exchange cannot
  be completed

After taking into account the aforementioned issues, a
technology strategy can be created. According to Martinelli et
al. (2010) a simple mapping of communication and collaboration
factors could be very useful and effective for a projects
success (tab.2).

Factors	Communication Technologies				Collaboration Technologies			
	Email	Blogs	Telephone	Others	Website	Shared Workplace	Data Repository	Others
Team Interaction								
Conversational	+		+					
Transactional								
Collaborative						+		
Communication and Collaboration Methods								
Synchronous				+		+		
Asynchronous	+						+	
Team Contexts								
Physical Infrastructure				-				-
Culture and Language			-					
Time Zones	+		-			+	+	+
Team Size	-			+				
Task Types								
Low Complexity								
High Complexity	-					+		+

Tab.2 Communication mapping

Virtual collaborative process

The stages of the virtual collaborative process are "problem formulation, shared processes, problem solving and collaborative solution" (Karpova, Correia & Baran, 2009). These processes can be summarized as a model for collaborative process (Fig.1) with suggested technological communication tools. (Karpova, Correia & Baran, 2009)
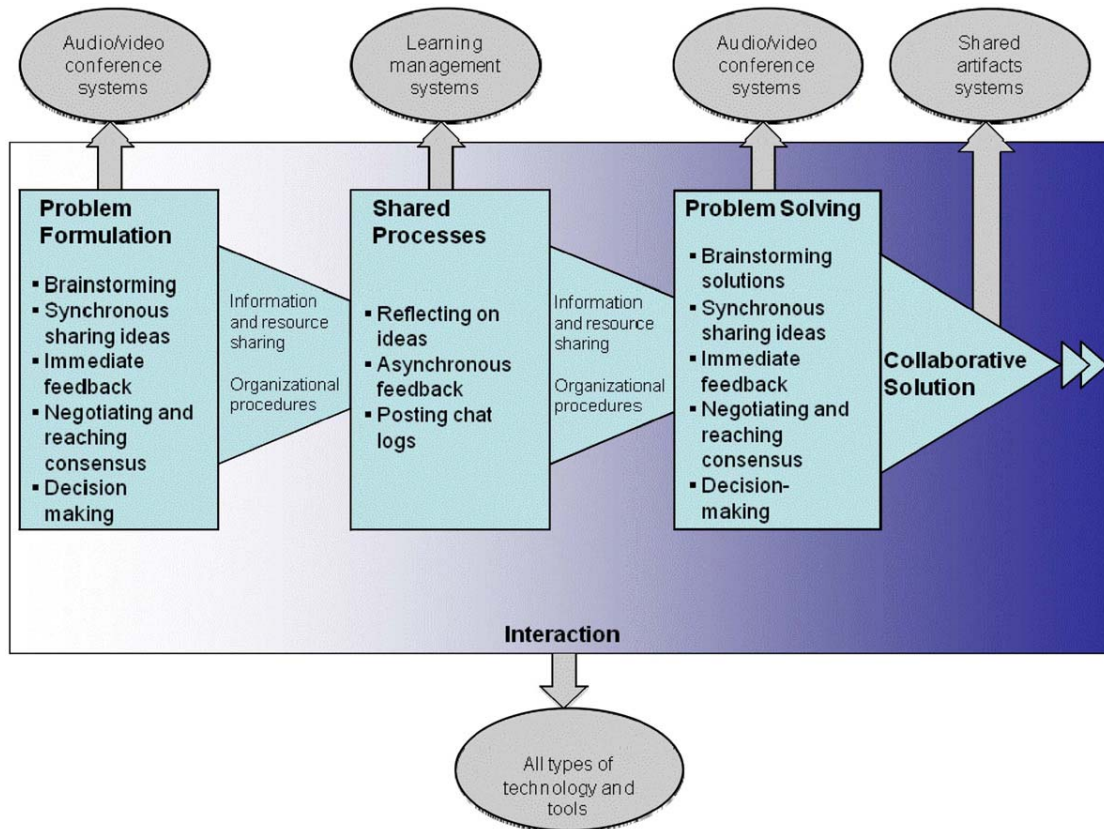
Fig. 1. Technology application at various stages of the virtual collaborative process.

Building virtual teams that can perform successfully is not an easy case. Before applying the aforementioned collaborative processes, the type of the team should be determined. According to Fisher and Fisher (2000) time, space and culture are the three characteristics that define the virtual team type. Time deals with *when* people work, space refers to *where* people work and culture refers to *how* people work together considering language, nation, political, social and other factors.

Fisher and Fisher (2000) argue that there are six types of virtual teams which are the following:

- Different time, same space, different culture;

- Different time, different space, different culture;

- Same time, different space, different culture;

- Different time, same space, same culture;

- Different time, different space, same culture;

- Same time, different space, same culture

Another perspective according to Shin (2005) is that virtual teams are categorized through four characteristics, at spatial, temporal, cultural and organizational dispersion. Spatial dispersion refers to geographical working position of team members, temporal position refers to time zones, cultural dispersion deals with the existence of cross-cultural team members and finally organizational dispersion reflects the level in which team members' work outside organizational boundaries. (Shin,2005).

Finally, according to Duarte and Snyder (2001), whatever the team type is, and before creating collaborative processes there is a plan for starting virtual teams which is comprised of six steps as follows:

- Identifying team sponsors, stakeholders, and champions; in order to ensure that the team and the project will have their supports

- Developing a team charter that includes the team's purpose, mission, and goals; having clear statement at the beginning of a project increases possibilities of success

- Selecting team members; it is very important to choose the most suitable team members in terms of experience and knowledge background to staff a team

- Contacting team members; the first approach and interaction between team members and the Leader is determinative

- Conducting a team-orientation session that includes orientation to the task, team norms, technological planning, communication planning, and team building; to make sure that each team member has specific responsibilities and everyone understands the way the team will perform

- Developing team processes; the processes that will be followed in order to execute and control the project.

Communication challenges

According to Clemons & Kroth (2011) what really matters is not where people work in geographical terms but how people work virtually and how they use technology in order to be effective. They continue saying that even though virtual team members are not met face-to-face this does not mean that conclusions for their character are not reached from the way they communicate.

Communication is very important for virtual teams and that is the reason it is a challenge for Leaders of those teams. "Communication is the mechanism teams use to transfer

knowledge, provide information, set direction, understand each other as individuals, ask questions, make decisions, take appropriate action, and simply relate to one another" (Halverson & Tirmizi, 2005).

According to Martinelli et al. (2010) even though English is said to be the world language, it is spoken as a second , third or even fourth language for most people. They proceed by telling that the crucial factor here is the recognition that communication is not just language.

Traditional project teams participate on both formal and informal meetings. Formal meetings are the ones that have specific agenda, determined duration and specific participants. On the other hand, informal meetings have not specific agenda, duration and participants. A conversation among team members in the lunch can be an informal meeting.

Contrary, virtual teams do not have the opportunity to participate in informal meetings. So team members, or even the Leader, do not have the opportunity to ask advice from someone that has the same project or resolve matters during the lunch time. In virtual teams, even a simple exchange of information may be time consuming due to time zones.

According to Martinelli et al. (2010)the fact that a day has 24 hours does not mean that the work cycle is productive 24 hours. Virtual teams that are in the some country do not face problems with time zones. But for global virtual teams, time zones are a big challenge. Everyone should accept that

sometimes inevitably will work early in the morning or late in the night in order to attend to a meeting. Otherwise these teams will not co-operate as they should and thus will not deliver successful projects.

Finally, Leader has to be aware of time zones, of national and religious holidays that concern all the team members and ensure that every team member acquints all this information for effective communication (Halverson & Tirmizi, 2005). The writters proceed suggesting that teleconferences for example should be scheduled in different hours in order to avoid disadvantaging specific team members repeatedly.

Importance of trust in global virtual teams

Building and sustaining trust in virtual teams generally is one of the biggest challenges that a Leader has to deal with. Due to lack of social presence in the virtual environment, a big planned effort is required by the Leader. According to Martinelli et al. (2010) social presence is the degree to which personal connection is established among the team members. On the other hand, Kirkman et al. (2002) say that face-to-face meetings are not necessary if trust exists among team members.

It is concluded that high social presence means strong personal connection. "Face-to-face meetings have the highest degree of social presence than any of the collaboration tools

and medium used be globally-distributed teams (Fig. 2)"
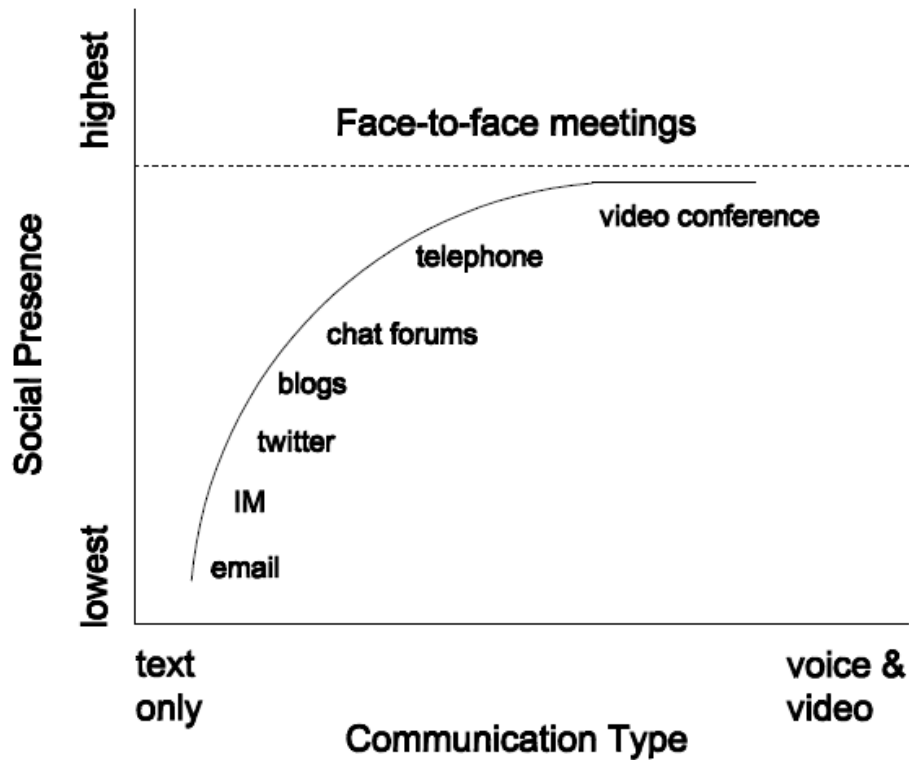(Martinelli, Rahschulte, & Waddell, 2010).

Fig 2. Degree of social presence of communication types

Global virtual teams cannot be based to the highest level
of social presence which is face-to-face meetings due to the
fact these teams are geografically dispersed. The truth is
that "direct exposure to people provides us with the history
and context necessary to understand their motivations and,
therefore, to make judgments about their trustworthiness.
Therefore, it is an imperative need for these teams to work in
an environment of trust and healthy collaboration" (Duarte &
Snyder, 2001).

Building trust in project teams generally and in global,
virtual teams specifically, does not mean to trust blindly

everyone. This could be very harmful for a project. According to Clemons & Kroth (2011) the Leader should take into account the risks involved and the credibility of the team members. A global Leader cannot be successful unless he/she understands that in these teams he/she will not be able to control everything. That is the reason that trust is a crucial factor of success in global virtual teams.

Leader should first trust team members and then they will reciprocate this trust. This cannot be reached unless team members are free to do their job based on their experience and are free to initiatives without waiting all the time for Leader's directions and decision making. That means that an effective global, virtual Leader should be comfortable with lack of control of everything due to geographical disperse.

In order this to happen, there should be "clear understanding of roles and responsibilities, increased commitment and accountability for meeting teams deliverables and deadlines, broader cross-cultural awareness, and establishment of direct lines of communication between team members" (Martinelli, Rahschulte, & Waddell, 2010).

Additionally, the Leader should fully understand that trust is something that can be built difficult but can be destroyed in a minute. According to Martinelli et al. (2010) there are some trust creators and trust destroyers factors which are listed in the following table (tab.3)

Trust Creators	Trust Destroyers
Act with integrity	Demonstrate inconsistency between words and actions
Communicate openly and honestly	Withhold information or support
Focus the team on shared goals	Put personal gain over team gain
Show respect to team members as equal partners	Engage lies, sabotage, and scapegoating
Listen with an open mind	Listen with a closed mind

Tab.3: Trust creators and destroyers

Conflict in virtual teams

All people are different; different personalities, different opinions, different way of thinking. This severalty sometimes can lead to conflicts. According to Meredith & Mantel (2009) conflict comes up when people working on the same project, have different ideas about how to reach project objectives. Martinelli et al. (2010) argue that conflicts are not necessarily bad but can have a positive impact also; conflicts can impact team collaboration, project's outcome even organization's performance.

In a global, virtual environment conflict can arise easier than in a conventional environment. The reason is that virtual teams are based on electronical, mostly asynchronous

communication which may sometimes result to misunderstandings that can take much time to be resolved due to lack of face-to-face interaction (Martinelli, Rahschulte, & Waddell, 2010).

According to Martinelli et al. (2010) the global team Leader must be very careful in recognizing conflicts among team members because unless conflict is identified, cannot be resolved. They continue saying that Leader should neither avoid conflicts nor interfering whenever a conflict occurs unless there are specific conditions which are the following:

- when conflict affects the performance of other team members;

- when conflict jeopardizes achievement of team goals;

- when conflict interferes with team communication;

- when conflict overflows to external stakeholders or partners; and

- when conflict involves a repetitive pattern.

A Leader in order to effectively resolve a conflict should be able to recognize the kind of conflict that has occurred. According to Gibson & Cohen (2003) there are three general types of conflict:

- task conflict; this conflict type refers to different opinions and perspectives of the team members. This type of conflict can have positive results improves decision quality. Additionally, the global Leader should act as a facilitator by welcoming this conflict type but without forgetting the desirable result

- process conflict; this conflict type has to deal with
  the way that tasks are performed and with resources
  allocation to each task. The global team Leader at this
  case should be vigilant because process conflict can
  have positive impact on team's effectiveness but can
  also lead to relationship conflict and have the opposite
  result

- relationship conflict; this type of conflict involves
  interpersonal differences and has to deal with
  behavioral issues among the team members. Since
  relationship conflict can only effect negatively the
  team and the project as a whole, the global Leader must
  identify this conflict at the beginning and resolve it.

In all the afforementioned conflict types, the global
Leader should allow the team members to express their opinions
and give them time to resolve their conflict by themselves
before interfering. According to Martinelli et al. (2010) the
Leader is responsible for creating and sustaining an open team
environment by ensuring that team members fully understand of
the team rules for conflict resolution.

Additionally, according to Shin (2005) the Virtual
Mediation System (VMS) can be very helpuf and useful for
conflict resolution in virtual teams. "Mediation is a form of
third-party intervention into disputes, directed at assisting
disputants to find a mutually acceptable settlement" (Shin,
2005). The third-party is established at the beginning of a

project, does not have the power to make decisions, must be objective and impartial."VMS is defined as an on-line chat mediation system that is based on Raider and Coleman's mediation strategies and uses on-line chat software" (Shin, 2005).

Team members that are in conflict, have just to log in the VMS server. It is easier to resolve a conflict that way, because it is a text-based procedure and negative feelings can be eliminated due to the fact that there is time for team members to think before they write.

Another factor that contributes positively to conflict resolution is that there is a specific procedure that has to be followed before negotiation starts which also gives time to disputants.

The procedure according to Shin (2005) is as follows. A request for mediation is firstly done and both parties have to agree, which is the "setting up the mediation step" (Shin, 2005). In the next step, "defining the needs and the issues" (Shin, 2005), the mediator allows team members to present their arguments and ensures that both parties understand the specific perspectives.

The third step of the procedure is "facilitating perspective-taking" (Shin, 2005). At this step parties communicate directly and try to identify and agree at the real issue.

Finally, "problem solving and reaching agreement" (Shin, 2005)is the last step of this procedure. At this point brainstorming is conducted and problem solution is real. Last, but not least, this step includes writing the solution and future agreements among the parties (Shin, 2005).

Decision making style

According to Lewin et al. (1939) there are three decision making styles; autocratic, participative and laissez-faire. A Leader that adapts autocratic decision making style is the one that has and uses the authority to make decisions and team members have to follow them. At the participative style, team members are part of the decision-making process but finally Leader is the one who decides. Finally, the laissez-faire style refers to a Leader that gives freedom to team members to deceide for everything, to resolve problems and conflicts without guidance.

Halverson and Tirmizi (2005) argue that there is a fourth decision making model which is considered to be suitable for global virtual cross-cultural teams. This style is close to participative one but the difference here is that Leader accomodates decision making among team members.

Leadership and Emotional intelligence

Intelligence Quotient (IQ) measures peoples intelligence but ignores behavioral and personality elements. Intelligence Quotient is very important for a Leader. But what also matters

is the identification, control and management of our emotions
and those of others which is the core concept of Emotional
Intelligence (EI)(Martinelli, Rahschulte, & Waddell, 2010)
which "was first defined and measured in the 1990s" (Halverson
& Tirmizi, 2005). Finally it was "found that Emotional
Intelligence is twice more important than technical skills and
Intelligence Quotient for jobs at all levels" (Gardner, 1983).

"EI is the ability to perceive accurately, appraise, and
express emotion;the ability to access and/or generate feelings
when they favilitate thought;the ability to understand emotion
and emotional knowledge;and the ability to regulate emotions
to promote emotional and intellectual growth" (Mayer &
Salovey, 1997).

According to Halverson and Tirmizi (2005) there are four
types of emotional skills which are the following:
- perceiving emotions: the ability to apprehend emotions
  in oneshelf and others
- using emotions to facilitate thought: the ability to use
  emotions in an effective way
- understanding emotions: the ability to understand
  emotional meanings and read signals behind reactions
- managing emotions: the ability to control emotions for
  self-improvement and social development

"As global companies have searched for the most critical
leadership competencies, they have learned that emotional
intelligence, not cognitive abilities, contributes to as much

as 90% of the differences between star performers and average performers" (Adler, 2002).

Additionally, research by the Center of Creative Leadership found that "the primary causes of derailment in executives involve deficits in emotional competence such as difficulty in handling change, not being able to work well in a team, and poor interpersonal relations" (Cherniss, 1999).

Daniel Goleman describes emotional intelligence as "managing with heart". Global, virtual teams need to be leaded by a Leader with EI skills due to the lack of interpersonal interaction, high complexity and cross-cultural nature of those teams. After all "What differentiates Leaders is not their intelligence, but their emotional response to situations" (Muller & Turner, 2007).

According to Dulewicz and Higgs (2003) there are fifteen leadership competencies categorized in emotional, managerial and intellectual competencies which are the following:

Emotional competencies

- *motivation*

- *conscientiousness*

- *sensitivity*

- *influence*

- *self-awareness*

- *emotional resilience*

- *intuitiveness*

Managerial competencies

- *managing resources*

- *engaging communication*

- *developing*

- *empowering*

- *achieving*

Intellectual competencies

- *strategic perspective*

- *vision and imagination*

- *critical analysis and judgement*

Global teams need their Leader to be aware of his/her emotions, to understand team member's emotions, to be able to predict one's reaction and drive it to the right way and finally be able to manage relationships. (Martinelli et al., 2010).

It is known that projects can only meet success if managed from someone with technical skills. But what matters is not only these skills but soft skills also. Global, virtual teams are by definition a challenge for a Leader for reasons that have been mentioned above. A global team Leader must not only have the appropriate technical background but must also be able to emotionally support team members based on the human factor which is necessary for dispersed team members that do not meet face-to-face.

Culture in global virtual teams

Global virtual teams are difficult to be leaded due to challenges and barriers that have already been mentioned. Leading these teams becomes more difficult when team members are not only geografically dispersed but culturally diverse also. "Global virtual teams consist of people from different national cultures with different native languages and different value systems" (Dekker, Rutte & Van den Berg, 2008).

"Culture is a complex, multidimensional construct that can be studied on several levels: international, national, regional, business and organizational" (Shachaf, 2007). In other words, culture is like peoples personality. Each person has its own personality. The way people think, work, communicate is about culture. Even the level in which people are comfortable with technology has to deal with culture.

"There are three models of how teams can cope with cultural differences. An assumption that underlies these models is that people from different cultures have different cultural precepts. Cultural precepts are sets of norms or standards of how to interact with one another" (Janssens & Brett, 2006).

Dominant coalition model is the first model that refers on how teams perceive cultural differences. At this model one culcure is dominant. "The common corporate language usually stem from a single culture that is chosen as the dominant culture" (Canney Davison & Ward, 1999).

The second model is the integrative/identity one which is based on collaboration, specific common goals and common identity. "This model is more culturally intelligent than the dominant coalition model because it generates fewer process losses" (Janssens & Brett, 2006).

Finally there is the fusion model in which everyone has to accept and respect differences and turn them to advantage in order to have the best outcome. Janssens and Brett (2006) argue that fusion model is the best for cross-cultural teams because leads to success through collaboration and knowledge sharing.

Halverson and Tirmizi (2005) argue that a global virtual Leader should be possessed of Cultural Intelligence which is the ability to modulate to different cultural situations by using the following intelligences:

- cognitive; someone has to self-aware in order to be able to understand culture and adapt new cultural settings
- motivational; motivation is a very positive factor for people that want to perform successfully. Different cultures are not an obstacle for those people that are focused on tasks and are willing to be part of problem-solving situations.
- Behavioral; people with this characteristic of Cultural Intelligence do not imitate other peoples' behaviours. Instead they react in a way that make others feel

comfortable and are able to recognize signals and interpret behaviours.

Except for peoples' culture, there is organizational culture also which is of crucial importance because organizations create cultural boundaries in which people work. Organizational culture is "A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 1992).

According to Martinelli et al. (2010) managing across cultures is much more than managing successfully different backgrounds and languages. "It involves the ability to blend national, company, and functional culture in a way which promotes collaboration and collective thinking" (Martinelli et al, 2010).

Massey et al. (2001) after research noticed fundamental differences in the apprehension of technology between team members from United States, Asia and Europe.

Gudykunst and Ting-Toomey identified four models of verbal interaction. (Shachaf, 2007). Shachaf interviewed 41 global virtual team members and an example for each of the model of verbal interactions is going to be presented.

The first model is direct/indirect which refers to the degree that people are willing show their intentions through

luminous verbal communication. Concerning this model, Americans and Israelis contrary to global virtual team members from eastern cultures, such as Japan or China, have direct communication and do not creat frustrations (Massey et al. 2001).

The second model is succinct/elaborate and is about how much information team members intend to provide. Elaborate style contrary to succinct style provides more than the needed information. Americans and Israelis have elaborate style whereas Asian team members use only few words which usually causes misunderstandings.

The third model is contextual/personal style. The personal style contrary to the contextual one, considers that everyone is similar and equal. Asian team members assume that for example English language is more personal than their own because they use specific strict expressions a fact that creates frustration to other team members with different culture that are more expressive.

The fourth model is instrumental/affective. Instrumental style is sender and goal oriented whereas affective is is receiver and process oriented. American team members some times considered that had unnecessary information where it was not clear if in fact had to do something which resulted in misunderstandings.

Leading global cross-cultural virtual teams is not an easy case but this does not mean that cultural diversity among team

members has negative impact. Contrary according to Mc Leod and Lobel (1992) cultural diversity can be proved creative because different and more ideas are heard due to culture heterogeny, different perspectives are presented, less groupthink occurs and finally all these factors can raise project's performance.

Methodology and Procedures Used in the Study

This thesis was based on the Literature Review Methodology through published and bibliography research. The author presented how global virtual, cross-cultural teams can perform successfully in terms of communication, cultural diversity and time zones that are of the most important obstacles that global projects face.

Conclusions

Global and local teams cannot be managed in the same way. Leading successfully local teams does not mean that global teams can be successfully managed also.

Leading effectively global virtual, cross-cultural teams is not light-handed but is not impossible either. Global Leader must possess technical and soft skills also. He/she has to dispose project management knowledge, experience in complex projects, cultural awareness, being comfortable with technology and electronic communication, being openminded, leading across boundaries and managing effectively time zones.

Global Leader should be able to balance ambiguous circumstances, to resolve conflicts among the team members, to promote knowledge sharing, to create common vision and specific goals and be Emotional Intelligent for being able to manage team members' feelings and behaviors for avoiding tensions that can lead to project failure.

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