

University of Economics, Prague

# **Master's Thesis**

University of Economics, Prague  
Faculty of Business Administration  
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Title of the Master's Thesis:

**International agile teams in digital and  
virtual environment**

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## **D e c l a r a t i o n   o f   A u t h e n t i c i t y**

I hereby declare that the Master's Thesis presented herein is my own work, or fully and specifically acknowledged wherever adapted from other sources. This work has not been published or submitted elsewhere for the requirement of a degree program.

Prague, May 17, 2017

Signature

**Title of the Master's Thesis:**

International agile teams in digital and virtual environment

**Abstract:**

The thesis discusses research on a selected international team that incorporates agile methodology framework. The team is distributed among multiple European states and has off-shore members in India. The research questions include cross-cultural aspects of teamwork, organizational viewpoint as well as other key areas of team cooperation. Analysis is performed based on questionnaire distribution and a series of structured interviews with members of the researched team. Research findings include a list of recommended changes to team organization and evaluation of cross-cultural and factors of cooperation and their impact. Research has provided an action plan and a set of research observations that include deep analysis of teamwork, the area has proven to be attractive for further research, hence the thesis is concluded with suggestions in this area.

**Key words:**

International teams, Agile teams, Cross-cultural management, Virtual co-operation

**Název diplomové práce:**

Mezinárodní agilní týmy v digitálním a virtuálním prostředí

**Abstrakt:**

Diplomová práce je zaměřena na výzkum vybraného mezinárodního týmu, pracujícího v rámci agilních metodik řízení práce. Členové zkoumaného týmu jsou rozmístěni především v Evropě a část týmu je lokalizovaná v Indii, což představuje ideální kombinaci pro zodpovězení vybraných výzkumných otázek. Klíčové zkoumané faktory zahrnují mezikulturní spolupráci, organizační strukturu, analýzu virtuálních nástrojů užívaných daným týmem a další významné prvky týmové práce. Výzkum je založen na dotazníkovém šetření a na strukturovaných interview provedených mezi členy zkoumaného týmu. Závěr práce obsahuje seznam doporučení k úpravě organizace týmu a ohodnocení mezinárodních faktorů ovlivňujících daný tým. Výzkum dále poskytl podklady k plánu pro optimalizaci pracovních procesů. Oblast se prokázala jako atraktivní pro další výzkumnou činnost, diplomová práce tedy zahrnuje technická doporučení pro potencionální další výzkum.

**Klíčová slova:**

Mezinárodní týmy, Agilní týmy, Mezikulturní management, Virtuální spolupráce

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## 1. Introduction

It is common knowledge that in last two decades the global economies, enterprises and societies have gone through unprecedented changes caused by the mass spread of information and communication technologies (ICT). The growth of this trend is exponential thanks to both the raising number of people connected to the internet, global internet usage in general and to Moore's law, which suggests why and how technologies have become more affordable for the masses.

The world population, especially in developed countries, has adapted new ICTs with a rapid pace and tend to encounter both their perks and disadvantages. While many individuals consider the arrival of the modern, virtual, connected workspace environment for the evolution in usual work practices, there are many factors that render current changes more revolutionary than ever before (Pick & Sarkar, 2015). It is the main role of managers and corporate leadership to recognize these changes and deal with them at an opportunity and threat level. It is crucial that responsible authorities in each influenced organization adopt an active approach and incorporate changes to the mindset of employees and change organizational structures accordingly, to make the organizational environment flexible, so benefits of modern technologies outweigh the challenges associated with them.

The current literature provides sufficient research findings and broad studies on the topic of ICT implementation and its impact on daily business. However, there is little available on how these massive changes impact the way a team communicates within this new technological environment. One key factor is that teams are more international without co-location, daily interactions are performed in a virtual environment instead of face-to-face communication. This often results in confusion, miscommunication, and reduced comprehension and tolerance of cultural differences (Dekker, 2016). Considering that a significant number of users experience technological issues while using virtual collaboration tools, there is increased pressure and the risk of team conflicts, as well as a decrease within the team work pace (Dekker, 2016). Based on these observations, authorities managing such a work environment or team that becomes subject to constant change should be on high alert and be aware of the recommendations on how to make the best of such changes. The Same applies to the team members and employees that are part of the workspace that is undergoing or went through the above-mentioned changes and became virtual, international and abandoned classic collocated office model.



## 1.1. The research problem

Even though modern technologies themselves generally render our work more immediate and independent, it comes with a cost. Among the main issues, it is worthy to indicate the bureaucratic system of electronic approvals or the lack of human interaction caused by over usage of ICT.

*“Most of what we call management consists of making it difficult for people to get their work done.”*

Peter Drucker

While in developed countries, most people are already connected, 81 % as of 2016, the developing world still scores below half of the population in internet usage, i.e., 47 % as of 2016 and when it comes to the least developed countries, only one in seven persons is an internet user, less developed countries scored 15 % in 2016. Overall, statistically this represents that more than a half, 53 %, of the global population is not connected (ITU-D, 2016). The question that arises based on these findings is, how will our society change once the ratio of connected individuals doubles and the world becomes absolutely connected. While within developed states, individuals had the chance to use ICT daily and companies adapted new ICT trends at the same time, adjusting their processes and management style. It is very likely that the arrival of broadband internet and related ICT in the developing world will be more rapid than it was in developed world, as the role of the early technology conversion was already completed by developed states (ITU-D, 2016). Therefore, it is important to be aware not only of the changes that ICTs themselves bring, but equally of the best practices on how to handle such changes when it comes to team work, international collaboration, and virtual work environment.

## 1.2. The purpose of the study

The purpose of this research is to improve understanding within specific types of teams as well as to investigate the perception from individuals' perspectives. Also, to evaluate the perceived value of the selected means of communication.

## 1.3. The objectives of the study

The main goal is to examine the way how actual employees employed in distributed and cross-cultural teams perceive their work environment, their colleagues with different cultural backgrounds, and the tools they use for their usual interaction. Based on the research outcome, there is a possibility to discover new ways how to approach collaboration in some country-specific teams or how to adjust the usage of certain communication and collaboration tools to improve teamwork.

The outcome of the research provides valuable data for both managers and employees that work in any form of intercultural or remotely located team. Since there are many general recommendations on how to approach work in such an environment, this research focuses on providing best practices only for limited specifics within this research scope.

## 1.4. The research questions

The main research questions selected based on the most common discussed topics in the current literature of the research area are as follows:

- Is it possible to improve the way specific teams utilize the means of both the virtual and usual communication?
- Are there any specifics for cross-cultural team cooperation or communication between selected nationalities? Is there a way to improve communication between these cultures?
- How do employees perceive work in big international corporation? Does it bring advantages or disadvantages?
- Is the perception of communication tools the same in all the cultures? Do researched team perceive them differently compared to other GE employees?
- Can team improve its communication strategy towards business units and users that are dependent on its performance? What would be the best way how to do so?
- Do employees have feasible concepts on how to improve the work environment and teamwork itself or are the ideas too differentiated and the research disapproves them?
- What areas of the topic are attractive for further research in the future?

Any derivative questions that would arise from the above stated main research questions are also considered as there is a high potential to encounter new relevant side research questions that were not originally considered.

## 2. Literature Review

While the topic of “virtual teams” become popular in last decade, most of the published literature consists primarily of general recommendations when it comes to the specifics of leadership or management of such teams. Secondly, as listed below, the very popular approach is the analysis of the currently offered technical solutions and tools to improve virtual cooperation, with the focus on how to implement or utilize them to their full potential without questioning whether the employees and team members find them useful.

The consensus is that the virtual workspace has become standard in many business fields and has been the standard in IT departments for quite some time (Birdie & Jain, 2016). The publications do not focus on how this arrived since the reasons are quite straight forward, obvious and omnipresent like cost saving, globalization etc. (Miller, 2014).

The second theme of the literature deals with the cross-cultural dimension of team work. In the past, there were countless publications and studies on international management and international team dynamics. In recent years, many of them include specifics of virtually cooperating teams (Hamebuth, 2015), (Hale & Stanney, 2015), (Hoefling, 2017). Still, the coverage of the topic is generalized with no specific research findings and usually provides list of general knowledge on best practices by merging the managerial viewpoint of international team and technical tools available (Stinton, 2013), (Aarno & Engblom, 2015).

Absent from the current literature is the multicultural perception and gaps between team members and their connection to the technological tools and means of communication. Hence, this is the main research question of this thesis. The research outcome enriches the view on how specific nationalities perceive their foreign colleagues while collaborating with them in the virtual workspace utilizing digital communication. In addition, the perceived value provided by specific digital communication tools is researched from the perspective of various employees in consideration of their nationality.

Moreover, the bulk of the current literature tends to be rather US-centric (Wildman, 2014), (Chrisphoer, 2014) and does not properly reflect the reality of virtual distributed teams, since, by the very nature of these teams, it is important to consider cultural diversity and different cultural backgrounds.

To summarize, the topic of individual behavior in international teams is widely examined in various research articles and publications. However, consideration of the ones related to teams that work within a virtual environment is not perceived as sufficient, this specific topic lacks full deep analysis. “Virtual team” is any group of individuals cooperating with each other towards common goal, but are not physically collocated in the same office – they utilize software tools to operate in virtual workspace (Pullan, 2016). Published articles regarding international virtual teams tend to be angled from one of the following points of view:

- The managerial view on team structure accompanied by a list of possible recommendations on how to improve collaboration in such a virtual team based on classical managerial practices – therefore, there is no deep analysis of the research phenomenon, that would incorporate all the relevant factors. Articles just provide description of examined trend from current managerial point of view (Chang & Hsieh, 2014), (Morley & Cormican & Folan, 2015).
- Research articles that feature deep analysis of the whole international virtual teams’ topic, but usually located in the same country/region of from a very nation/cultural centric view (Zakaria, 2017), (Gaan, 2012), hence provide biased research outcomes with limited applicability of proposed methodology.
- Technical review focused on used software solutions and tools for work tracking/visibility and team communication (Quade, 2015), (Watanuki & Moraes, 2016). Even though this a key success factor in virtual collaboration, standalone tools analysis does not consider other inputs such as end user’s preferences based on their cultural background and other needs arising from their processes.
- Overall work market, globalization and IT trends analysis and research articles focusing on phenomenon of offshoring also provide considerable amount of valuable information (Gilson & Maynard, 2015), (Barnwell & Nedrick, 2014), (Pick & Sarkar, 2015). On the other hand, they tend to leave out the deep analysis of the team processes in this very specific environment and the way how individuals perceive and accept them.

Currently published works have the tendency to oscillate close to one of four approaches while not incorporating all the important factors together in a comprehensive study. Since there is a multiple research activity on each of the four subtopics, state of art provides common agreement on importance of all four of them.

Based on the above, space for further research is especially in the area of merging these factors together into comprehensive study and in the possibility of examining correlations between them, while incorporating selected influence areas such as nationalities, organization structures, cooperation tools and agile framework.

### 3. Methodology

The research is conducted among the employees of the General Electric (GE) company. GE, established in 1892, is one of the world's largest technological companies and the only company currently listed in the Dow Jones Industrial Index today, that was included in 1896 original index listing (Schaefer, 2011).

The GE company is a wide spread industrial company that has multiple subsidiaries (divisions) across multiple field of business. Most of divisions are focused on technologies and industrial or machinery production (previous subsidiaries included e.g. finance or media). Based on the rich history of the company, its global extension (up to 80% of business is outside of US) it provides a perfect research environment. Also, CEO of GE Jeffery Immelt introduced new goal to transform the company to so called "Digital Industrial Company" in 2015, that features multiple initiatives that move the company towards digitalization and into industry 4.0. field. This announcement makes GE especially interesting for our research purpose thanks to encouragement of more digitalized work environment in the company itself.

The research is conducted among employees of the GE Aviation, a division that produces multiple products in the aeronautics industry with focus on the production of airplane engines. The division employs over 40 000 people across the globe in 82 sites; therefore, the combination of employee's cultural background varies, making the work teams suitable for the intended research.

The Aviation division activity includes manufacturing, R&D and aligned services to finance in the field of aerospace. Since establishment of GE Digital in 2015, multiple changes occurred in the way the Aviation division does business and daily operations. Teams are more distributed and departments are encouraged to utilize all the benefits of digital collaboration and cooperation to their maximum. The Creation of this division also included the transfer of a significant number of Aviation IT employees to encourage the cooperation within the division and implement intended changes faster. This promoted not only cross cultural communication but also cross business communication thus, making it a daily practice of IT employees.

#### 3.1. Research design

The research itself is of an exploratory character. As stated above, the main research questions focus on the possible findings of the general recommendations as to how to make cooperation in virtual environment with culturally diverse team members more effective. And how specific cultures might influence the way the employees perceive others and their work habits. The research includes both qualitative and quantitative. While the qualitative part of research may not provide enough relevant data, it is more descriptive to identify this research

overall quantitative rather than mixed; however once merged with data from quantitative part – the research data baseline should be sufficient.

## 3.2. Data sources

For the data collection section, the main source of data is the primary research conducted among company employees. The primary data is also enriched by the available internal sources of the company on the relevant topics. While the analysis and evaluation of the data is done based on source information that are public (see chapter 2). The final evaluation includes some of the personal observations acquired during this process and employment in the researched department.

## 3.3. Data collection techniques

The quantitative section of the research is conducted on primary data collected via internal a GE survey tool. The qualitative section is based on structured interviews with selected members of distributed virtual team with significant cultural diversity (see chapter 4.1.2). The Overall research reference point is the company intranet site, with a link to survey, link to further research regarding the topic of virtual teams & digital workspace and once the research is completed, the site will also provide a list of findings and research outcomes. The Full questionnaire structure is found in appendix no. 1.

### 3.3.1. Quantitative research

The GE survey tool allows the creation of a structured modifiable questionnaire with a dynamic interface that changes according to the selections in previous questions and parts of the questionnaire. Therefore, the respondent is presented only with the relevant questions and is less prone to lose focus or leave the questionnaire incomplete. The questionnaire also features a detailed explanation for each question or group of questions to ensure that the respondent understands both the interpretation of the question as well as reason why the question is being asked. The structure of the questionnaire is divided into multiple sections that focus on various aspects of virtual communication and is as follows:

#### Communication tools

The respondent selects as many of the 10-identified means of communication that are commonly used as a part of the work routine. The offered means of communication vary from the common methods of communication such as, face to face, voice calls or emails to more virtual tools such as, WebEx conferencing or screen sharing to business and other platform that include, Yammer, Colab, CA Agile Central or Jabber chat. After the initial selection, the respondent is asked to evaluate each of the selected means/tools on a communication

effectiveness scale. The options of the latter include gradients from “Not at all effective” to “Extremely effective” in total five-level scale.

### Team communication

The above-mentioned selection of tools influences the second section of the survey. While respondent evaluates the selected means/tools on scale of usefulness for communication within the team that represents the daily communication inside the company, a distinction is made between collocated and remote colleagues. The usefulness rating scale has five level scale, from “Very good” to “Very poor”. The last question of this section enquires as to the amount of emails that the respondent receives during a usual business day and offers five answers on scale “overwhelming number of messages, well balanced to insufficient (lack of key information)”.

### Style of communication

This section explores the style of communication between the respondent and co-workers, managers, both direct and an organizational level above, contractors, unknown GE employees and external vendor teams. The respondents then select what style of communication is preferred from their perspective. Possible answers are: Formal, Semi-formal, Informal and “Does not Apply”, while the detailed description for each of three styles of communication is provided in the heading of the section.

### International Teams

This part of survey provides key research data as to the perceived communication among selected nationalities. As the survey focuses on the Aviation division in Europe and furthermore, the cooperation of European sites with remote colleagues in the United States and India were added to European countries: Germany, Poland, Czech Republic, Italy, United Kingdom, Romania and Hungary.

Respondents are asked to identify all the above-mentioned states where they have remote colleagues and how they perceive them in the work process. These topics include the perception of response time, relevance of answers, necessity to follow-up for clarification, mutual understanding and comprehension of shared content and overall perceived satisfaction with the results of communication. Also, respondents are asked to identify improvements in the following areas that are most important in their opinion, for each of above selected countries: task prioritizing, positive attitude, time management, direct approach, team encouragement, to name a few.

## Demographics

Besides the basic demographic data as to age, divided in 4 age groups, gender and the level of formal education, the respondents are asked to select the nationality they identify with the most. This serves as a central aspect for the cross-cultural comparison, while some respondents may have a different citizenship while they identify more with another country. Respondents are also asked to select their employee rank to differentiate regular employees from specialists and from management based on the company internal employee branding.

### 3.3.2. Qualitative research

Qualitative research was conducted using the individual structured interviews. Questions covered approximately the same areas as the questionnaire, while giving the opportunity for a direct follow-up with the interviewee. The structure of interviews is described in detail in chapter 4.1.2. Due to the close relationship between the researcher and some of the respondents, the format of selected interviews is switched to a semi-structured and semi-formal interview to make respondents more comfortable with sharing their view and to obtain a deeper understanding within the allocated time. The interviews were recorded for later transcription, reference and analysis.

### 3.4. Issues of reliability and validity

As for the quantitative research, the questionnaire was distributed strictly via company internal channels. Potential candidates were required to login using company credentials that assures that it was completed only by company employees and removed the possibility of duplicity in respondents as the system does not allow multiple submissions.

The main concern as to validity of answers is the possibility of biased respondents and expressions of frustration that arise from various possible workspace related externalities. Also, some biased respondents might want to improve the perception of their country via submitting overly positive answers about their local colleagues while the frustration with specific individuals from researched country might push the respondent to submit overly negative values for the whole country even though that regularly the respondent would be able provide more balanced assessment.

As with any other questionnaire, the respondents may be skeptical as to the anonymity of their replies, and in turn, may deviate the answers especially in questions relative to their managers, supervisors or close colleagues. This risk is significantly mitigated by the fact that the survey tool is a company standard and features an anonymity disclaimer supported by corporate policy on employee protection.

Similar issues may occur during the qualitative research, especially since the anonymity is not present during the interview and the perceived trustworthiness of the interviewer might vary



between participants. Therefore, the selection of the questions was less conflict evoking and focused on possible constructive solutions and ideas for improvement. Also, some respondents may be influenced by different cultures, possibly due to the circumstance that they study/work/live abroad. If this occurred for prolonged periods of time, it is expected to have an impact on the mindset of the interviewed individual and hence be reflected in answers.

Overall, the least reliable outcomes may result from the fully structured interviews, as the respondents will tend to answer formally and be less likely to provide actual opinions and perceptions of their work with colleagues, the assessment of the tools will be less likely to be deviated, since there will not be involvement of colleague/management assessment and therefore, the need to restrain in the expressing the views.

### 3.5. Sampling techniques

The questionnaire was distributed among members of the research team as well as other IT colleagues that have organization link to research team. The Respondents include all employee ranks, nationalities and educational backgrounds. Non-probability sampling was enriched with a proposition to share the survey to evoke a snowball sampling and obtain as many relevant responses as possible. As mentioned previously, the survey ensures that the occurrence of duplicate sampling is not possible.

Due to the geographic focus of the research on Europe, most the answers are expected from European employees and connected off-shore teams. The US employees are involved in the second phase of the research, there is no expected involvement from other regions such as Africa and Pacific states.

Interviews for the qualitative segment were conducted on purposive sampling, the selection of the interviewed subjects based on judgmental sampling from relevant employees, with an emphasis on interviewer's perceived honesty, knowledge of the relevant areas and the willingness of the subjects to participate. The goal was to include at least one regular employee, one specialist and one manager, each from different nationality to make the scope of the interviews as diverse as possible.

### 3.6. Definitions of key terms concepts and variables

The following definitions serve to clarify the context of the research and subsequent outcomes.

#### Virtual team

Team in a long-term sense, with at least one permanent member that is not collocated with the others members of team, and ICT means of communication are utilized to stay in touch (El-Sofany & Alwadani, 2014). Research priority is given to team that has more than a single remote member, since that way it is possible to highlight specifics that are established by not being collocated as a whole. The main difference between remote (not collocated) team and virtual team, is that virtual team keeps communicating mainly via ICT technologies and organizes the common workload using various tools connected to company network or the internet (Kurtberg, 2014). In latest years, the difference is slowly disappearing as the ICT communication become standard, however this is one of key specifics that need to mentioned.

#### Cross-cultural team

Also in long-term sense, meaning that at least one member of the team has a different culture background than the rest of the team (Rozkwitalska, 2016). The more members of the team identify themselves with different cultures, the more complex the teamwork could get and specifics of multicultural cooperation tent to be amplified (Babatunde, 2015).

#### Digital and virtual tools

There are countless tools and means of communication that are utilized by both collocated and remote team. This research will focus on most common ones in usual human interaction while also researching some of more specific ones that might be company of business exclusive (Appendix no. 1). Digital and virtual tools in general experienced a boom in last two decades and as explained above, are now part of everyday live (Olson & Appunn, 2014), thus there is no need for further description of their specifications.

## Agile environment

Since the research will be conducted among significant number of IT employees, we can easily refer to agile environment as to a workspace that follow some of the principals stated in agile manifesto. Even though the manifest was published primarily for software development, its variations apply to many other areas of teamwork and to a way of achieving common goal. Agile environment can be therefore easily defined by four following principals:

*Individuals and interactions over processes and tools*  
*Working software over comprehensive documentation*  
*Customer collaboration over contract negotiation*  
*Responding to change over following a plan*

(Manifesto for Agile Software Development, 2001)

Not every questionnaire respondent might be aware of the fact, that GE is incorporating agile principles to its work frame. Also, the impact of these changes is varied between respondents, in general it is expected that all the respondents are somewhat familiar with concept or are influenced by it. Meanwhile, all the individuals selected for interview are well familiar with all the agile principals and have even attended specialized training sessions on various agile methodologies.

## 3.7. Data analysis and interpretation

Much of the data was processed using regular tools and managed by common research analyses practices. However, there is a major difference between processing the quantitative and the qualitative segment of the research.

### 3.7.1. Quantitative analysis

As mentioned above, the data were gathered via a GE internal tool that ensures anonymity, uniqueness, and relevancy of respondents. The questionnaire replies were processed and structured in the survey tool, and provided an Excel spreadsheet to further analyses. The central areas researched are:

- Differences between perceptions of tools based on demographics of respondents (correlation analysis);
- Perception of teamwork based on demographics (correlation analysis), and
- Cross cultural cooperation based on demographics (correlation analysis).

Interpretation of the data is provided using tables and graphs that indicate the central research outcomes.

### 3.7.2. Qualitative analysis

The set of various interviews with a focus on the diversity of interviewees was recorded and afterwards, transcribed (Appendix no. 2). The Main areas of interest are:

- Common views on team work and work environment;
- Differences between views based on professional/organizational level, and
- Possible feasible improvements to teamwork.

The Outcome of the qualitative analysis is provided as a list or set of the most commonly agreed and most disagreed views or topics stated during the interviews. Outcome also includes an action plan on the improvement of the team collaboration based upon agreed approaches among interviewees.

Since the interviewed employees tend to include out-of-scope factors to the evaluation of virtual teamwork, these factors are not be considered to avoid scope creep of the research. Also, some of the factors are irrelevant to the research and therefore, are not presented in the data analysis results.

One of the goals of qualitative analysis is to provide valuable data that can be later merged with questionnaire outcome to support research findings with more in-depth inputs from selected team members.

## 4. Research findings

The Following outcomes are based on the described methodology and have been reformulated into an action plan with the aim to improve team collaboration and perceived communication among team members.

### 4.1. Data interpretation

**Quantitative segment** – data from the questionnaire were analyzed and the most relevant for the research are extracted. Due to high total number of questions (147) the full analysis of every correlation would exceed the selected research scope. Hence, the selection of only the areas that are related to the interviews, provide comparable data, and contribute valuable data for the research outcome.

**Qualitative segment** – full interview transcripts are found in the appendix no. 2. The Following data interpretation features summaries of the interviews and their highlights. Afterwards, the main areas of interest were identified and compared with multiple views and comments from the interviewees. The, Outcome represents the analytical view on the most common agreement and disagreement areas in the perception of research questions.

#### 4.1.1. Quantitative part – questionnaire

**The Primary questionnaire** was distributed during April among members of researched team. Since the survey was anonymous, it was not possible to reach a full return rate, due to the lack of an option to identify members who did not provide their responses. The Return rate was 72 %, the table below provides more detailed information on the structure of respondents.

**The Secondary questionnaire** that consists of the same questions was distributed among the US team within the same organizational structure, to capture external views on the researched team and cooperation with it. Both questionnaires were tracked individually to separate researched team views and external US views on the researched team. Since organizationally connected US team also has some international members, the secondary questionnaire contains some ratio of other nationalities as well. The Return rate of the secondary questionnaire was 28 % however, the secondary questionnaire did not provide the desired data, as none of respondents actually works with researched team.

Primary questionnaire		Secondary questionnaire	
Czech Republic	6	United States	11
India	5	UK	1
Poland	2	Mexico	1
Romania	2		
Turkey	1		

Table no. 1 – Questionnaire respondents structure  
Source: The author's research

Data from both questionnaires were extracted to Microsoft Excel. The text values were replaced by the relevant numerical values using the “replace” feature, and whole data structure was transposed to make the data more suitable for analyses.

### **Primary questionnaire**

Distributed among members of the research team only, provides detailed in-depth analysis of how people prefer to communicate with each other, what tools they prefer to use and any areas of improvement, generalized among team members based on their nationality.

The Acquired data were analyzed with the relevance to the outcome of interviews to support research findings and provide baseline data on the topics that were not covered during the interviews. Individual interviews however, cannot be linked to a specific questionnaire record, as the survey was conducted anonymously - to obtain direct and accurate answers, especially when it comes to international cooperation and opinions on team colleagues.

### **Secondary questionnaire**

The Desired data were not obtained due to fact that respondents were not among those who work with the researched team. Three main points of concern were identified, which should be undertaken before further research. It is possible that the time period of 6 months was not sufficient to establish close relationship between members of researched team and their colleagues in US. Or that the relationship is only established among a few internationally involved individuals. Secondly, the response rate was significantly lower compared to the one of the researched team, hence the fact that three-quarters of the US have not responded dramatically increases the chances of not having a respondent connected to research team. Lastly, the questionnaire consisted of 147 questions, that could have discouraged numerous potential respondents from completing the questionnaire. Therefore, the length of questionnaire for secondary distribution should be reconsidered.

Valuable data were provided for the research and are found in the first section of the questionnaire - communication tools analysis. These data may be used to formulate future communication strategy of the research team with its American counterpart, aligned with preferences of the US colleagues.

### 4.1.2. Qualitative segment – interviews

Structured interviews were conducted from February to April of 2017. Some interviews were done in person, others were carried out over the telephone or the videoconference tool. Respondents were asked following questions:

- Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?
- Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?
- Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?
- Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?
- Do you see any improvement areas when it comes to communication with users/clients from specific countries?
- Do you see any organization barriers on Corporate level that represent impediment for effective team work?

Summaries and the highlights of each respondents' interviews are listed further in this sub-chapter; the table no. 2 below provides basic overview of the interviewed team members nationality and their role in the team for faster orientation and reference:

Team role	Nationality
Manager	Czech
Chief specialist	Indian
IT technical specialist	Romanian
Finance specialist	Polish
Independent contractor	Turkish
Vendor team contractor	Indian
Intern	Czech

Table no. 2 – List of interviewees      Source: The author's research

The Interviewees were selected to provide variety in team roles and nationalities to identify key elements of cooperation for the research.

### 4.1.3. Interview summaries

#### **Czech manager interview**

Perceives the cultural structure of the team as commonplace within the IT industry, however, indicates that feedback from end users of the developed software, generally possess negative attitudes towards the offshore team in India and suggests that the overall work results and the communication itself could be improved by possibly having development team members located in Europe. i.e. the same time zone and same cultural background. It is necessary to note that the communication issues occur between the development team and end users and not between the team members.

Overall, the view of the team is very positive and almost to an ideal state. While mentioning that there exists diversity within the team, in regards to the cultural and professional background, this provides learning opportunities for everyone. The Manager does not perceive any nation-centric tendencies within the team, but does mention the possible lack of American cultural input.

When it comes to the communication tools mix utilized by the team, there is a negative perception of over-usage of the chat application while some of team members located in the same office tend to use this application instead of face-to-face communication. In doing so, nonverbal factors are lost in chat and leads to confusion or misunderstanding between co-located colleagues.

Corporate limitations are mentioned in several ways, especially due to necessity to align the budget, work methodology and overall management with corporate structures. However, even more negative influences arise from the limitation in financial matters that is, among others, results in an insufficient human resources capacity.

Local business issues include dissatisfaction with the office environment, especially open space noise complaints, that create communication barriers as well as the fact of being co-located with Czech business representatives, that provides them a privileged access to the whole team at the expense of other European business representatives.

#### **Indian chief manufacturing specialist interview**

On very contrary, as described below, the opinion of Indian specialist on the team work and especially knowledge sharing is very negative. The impression of the cultural mix of the team is not perceived as well-balanced and there are multiple areas of improvement specified. These include workload reduction, a less “polarized” idea of the whole team, to knowing other team members on a less formal level and more on a personal level.



While suggesting that more close business ties do allow a smoother way of working and the environment of trust makes business decisions easier and faster as it is not necessary to keep communication formal and sometimes to make decisions without consulting business partners due to mutual trust. The Overall interpersonal communication and bonding is considered paramount to make things work. The Indian specialist also mentions that there is virtually no replacement for such way of doing business, he also mentions that is necessary to give positive feedback to business partners, to display appreciation of their work and input.

In regard to the cultural mix of team, it is suggested that inviting someone from abroad, especially from USA, could assist in how US teams work and that the team would be able to adopt the fashion in which the US team works. He feels that this would be especially helpful, since the company is driven by such teams. Also, the major difference between the US way of working and European is that, Americans are able to place more trust into their vendor teams and that this is contrary to the current business practice of the researched team where vendors are given strict plans and are pursued to accommodate service level agreements and key performance indicators.

When it comes to “influence distribution” inside the team, there is a perception of team polarization, even though the team operates in quite an efficient fashion and does not tend to be centered on one nation or one school of thought. There is still room for improvement when it comes to incorporating the Indian vendor team to everyday work. For example, the idea to have a vendor resource allocated to the core team is highly supported as it is a common best practice in most of the distributed teams and provides numerous proven benefits such as, closer ties between the team members and higher work encouragement. Also, the approach that team decided to take, to have an extra European consultant on-site instead of short-team allocation of Indian vendor is perceived as a wrong decision due to above cited reasons.

Tools that the team uses are considered well-balanced with the note that long emails, full of content, are an obsolete way of doing business and that they are used less frequently, which is considered a good thing. Also, videoconferencing “from the table” is mentioned as the best way to get things done with the importance to turn on the cameras is highlighted.

As for organizational barriers that arise, there is one main point i.e., the entire structure/hierarchy of the departments of the company. The current structure is considered flat, and the fact that unexperienced colleagues are on the same organization level in the hierarchy as experienced senior specialists is perceived in a very negative way. Absence of hierarchy does have negative impact, especially when outsider (HR or higher management) is trying to understand the team structure. The flat structure is not considered as an ideal one when it comes to knowledge transfer and that the responsibility is not distributed in an ideal way. However, it is acknowledged that this is an overall corporate idea of the company, its DNA, and is part of not becoming too bureaucratic. What could be improved on a team level is knowledge based among team members on the product. Meaning that in some other, team roles, managerial skill

are more important than the product knowledge. Nevertheless, if the product knowledge is negligible, it does not generally help team work.

### **Romanian IT technical specialist interview**

The cultural diversity of the team is not perceived as a topic at all, and is considered as a standard in a globalized world wherein, the cross-cultural structure of the team is embraced. There is a strong focus on evaluating the communication with other team members based on their individual skills and their individual approach towards the team work. The strongest factor that is highlighted is the language barrier that occurs both ways from outgoing communication due to the lack of understanding and incoming due to a strong accent or poor level of spoken English. An Interesting note is that the barrier is present only when it comes to verbal communication. There are no specific issues mentioned about written communication. An Overall suggestion to change the cultural structure of team is not supported, as the idea is that team performance is based on individuals and their commitment, no matter the cultural background. The key element to success is good English language skills and the ability to openly communicate within the team. Avoiding the language barrier that is somewhat perceived now is a main improvement area when it comes to team composition.

The team is considered Czech-centered due to fact that Czechs are the second most populous nationality in the team and especially due to fact that they occupy managerial and specialist positions. However, there is the position that the team is effective not due to the mix of the cultural backgrounds of the team members but due to set of specific procedures and related processes. The crucial element to provide high-quality service to end users is seen in the team morale, organizational structure of the team and ability to follow procedures and behave accordingly to set workflows.

Utilization of the tools is adequate, with exception of the high number of meeting invitation which leads to lack of focus during the session. Otherwise, the balance is considered good, with the suggestion that company internal platform and social network (Yammer) could be better utilized more to maintain the communication with end users.

The issue of the high number of meetings is mentioned again as a main possible area of improvement in teamwork and the way the team is organized and does daily work. Meetings are considered long, inefficient, invited team members do not feel involved in the agenda for the most part of the session. The recommendation given is to hold more attendee specific meetings of a shorter duration with increased attendee involvement for a larger portion of the meeting.

When it comes to communication with the users from various countries, there is one general recommendation, that is, a higher utilization of voice call. Voice calls are at least, an “intimate” form of communication, and are especially valuable in communication with very engaged users,

that have a significant workload. The voice call is one of the means how to solve urgent issues in the most effective way as well as some sort of token of appreciation when it comes to post-work contact with the colleague. The call is perceived as very positive even if they would not be scheduled in advance or noted beforehand.

The overall communication across all levels of the company is perceived as easy and smooth, while giving credit to a wide variety of tools that can be utilized for the communication as well as to the company culture.

### **Polish finance specialist interview**

Team structure could be optimized if some of the offshore developers would be replaced by Europeans, that would significantly ease communication with end users, that often struggle with language barriers on both sides.

The influence distribution in the team is perceived as common in IT operations with offshore developers. Hence, the fact that management is located in Prague does not make it “Czech-centered”, as there are other nationalities in the Prague Headquarters as well. Those individuals also possess influence on decision outcomes. Also, onboarding of new members in other European countries render the team more nationwide and hence, reduced possible nation centrisms.

The communication tools mix is embraced with the mention that some meetings have an unnecessary high number of attendees, that are sometimes not relevant to the topic of the meeting, and therefore, do not have any value in attending the session.

The team framework is considered balanced with a positive approach towards the agile methodology, however, there is still some concern relative to the decommissioning of old processes that linger in the team organization. The Suggested improvement is to obtain a higher travel and living (T&L) budget that would allow team members to travel to other offices and meet in person to bond and share knowledge. This activity was perceived as a very positive one, however, it was reduced due to cost-savings activities in the company.

Communication to users, regardless their nationality, has a potential to improve by engaging local team members to communicate during the process. This, in turn, can help to clarify some miscommunications between developers and local users.

The company is perceived positively with the stress on having the possibility to consult a wide variety of experts on various topics, as well as a possibility to deal with technical issues using the 24/7 helpdesk service. The main negative aspect is the recent cost-cutting activities that reduced the T&L budget to its very bottom and no longer offers full opportunities for the team to grow in interpersonal matters.

## **Turkish independent contractor interview**

The idea to have as a diverse team as possible is highly encouraged and supported especially for the reasons for extra language and cultural background knowledge once the newcomer joins the team. However, the selection of a new nationality should be aligned with the regions wherein the end users exist, and in this sense the culture mix of team is seen as sufficient.

The team is not considered strongly nation-centric in any way, the fact that the management is Czech is highlighted but the importance of the statement is diminished by suggesting that all the communication is carried out in the English and that this somewhat eliminates a nation centric approach. The closing statement is that the team might present some sign of nation centrism, but overall involvement of other cultural backgrounds make it “trans-national centric”.

The offered variety of tools is perceived in a positive way, with the note that since team underwent multiple changes in communication tools structure there is a multichannel communication that is difficult to facilitate, so better overall integration of the tools would be welcomed addition as well as a higher stability in the selection of tools.

The teamwork rhythm is perceived as balanced and regular meetings sessions give the team the right amount of connectivity and helps members to stay in touch. Also, the role of a team manager is highlighted in matters of engagement. While managers with a classical managerial style would usually delegate and overlook work, the current manager is a person of action, willing to dive deep into the issues to solve them. What can however be improved is the visibility of projects being implemented in other countries, some concerns regarding the lack of information about changes that country specific projects can have on the whole system.

The lack of sufficient foreign language skills is seen as a main area of improvement when communicating with end users, this communication barrier is reported in almost every country. While one of the suggestions as to possible improvement would be the implementation of translation software to the current process that would allow direct communication with users that have a limited command of English. Even that the overall GE standard is that everyone should be able to speak English, this is not the case that is observed with some users.

Main letdown that goes with being part of the big company is pressure for keeping the system simple. On the contrary, the users themselves push to make the system customized to ease their work, the corporate headquarters prefer to keep the system simple to keep its maintenance cheap. Also, the pressure for cost reduction is mentioned, however it is not perceived as a letdown but as a meaningful and understandable initiative.

## **Indian vendor contractor interview**

An Overall comparison of global offshoring possibilities presumably places India the very top when it comes to an English language skillset that is a main benefit by interviewee. Given the researched team structure, the key to success is again placed on the language capabilities of various team members. Indians are very flexible when it comes to adapting required work processes and are ideal for such a diverse environment. The team structure appears to be adequate and benefits or disadvantages of the cultural mix depend on the specifics of the situation. In addition, there is mention about the perk of being part of global company that can afford to hire resources anywhere in the world if needed.

The team is not considered nation centric whatsoever, it is particularly named as “business centric”, meaning that when multiple countries are involved the team is focused on processes that are to be followed and that bring advantages rather than disadvantages. While the two major groups in the team, Czechs and Indians are acknowledged to be the most represented, the fact that multiple other nationalities are involved make sure that the team remains international. However, even though Indians are the most populous nationality in the team, they are not considered decision makers, as the core team and management is located in Prague, so the development team has little influence on where the team is being directed.

Recent changes in the tools used by team for communication also brought confusion to the tools structure. There is more than one tool used to track work and projects progress, hence there is a strong suggestion for improvement by consolidating the tools – to have one tool where all the work is properly managed. Email and chat application are considered for the most effective means of communication. The role of WebEx screen share tool is seen as paramount for getting the work done.

Overall team cooperation is perceived as good, with a positive evaluation of recent changes besides the mix of tools, new agile way to organize work and team meeting rhythm is embraced with the suggestion to reconsider the number of meetings, if it would not actually help to reduce the meeting workload on individuals. After the implementation of the agile methodology, the team communication and cooperation constantly improves.

There are no country specific suggestions, however a recommendation is made once the users do not respond to the development offshore team, it is best to contact someone close to the user and since the team has at least one member always co-located at the business site, it is quite easy to do so Also, if communication issues occur, the agile framework allows developers to share this burden with the rest of the team thus to diminish the pressure on the development team.

There are no communication barriers due to corporation setting, however, the development is stalled due to GE development hardware and software restrictions. So, a more liberal IT security policies would actually allow the development to progress faster, getting multiple approvals just to carry the laptop outside the vendor building are seen as understandable, however as a impediment to faster development.

### **Czech intern interview**

Cultural diversity is embraced and highlighted as one of the key success factors for the team. Also, not only the cultural diversity is indicated, but the educational and professional one as well. The impression is that people tend to focus on the cross-cultural factors of cooperation and do not pay attention to other important aspect such as background every other that the person has. Spreading awareness about team members' background is therefore considered for one of main possible improvement areas. As for the cultural mix, it would be beneficial to hire someone especially from USA, since the team grows closer to American organizational structure. Some cultural inputs would assist the team to be more aligned, especially if the new person would be co-located with the core team in Prague. Generally, to hire someone from abroad is considered positive, as it imports to the team yet another perspective. Even a short-term stint of a new nationality is viewed positively based on previous experience with on-site contractors.

The team is not considered nation-centric in any fashion; it is acknowledged that it consists mostly of Indians and that the second most populous groups are Czechs - including the majority of management and decision makers. However, everyone in the team is well educated and most of the team members have a long-term experience in the IT industry. That allows them to function with each, without the necessity of driving the work in any specific way. Overall perception is, that team members are aware of the US way of doing business and try to practice it at their best while enriching it with their nation-specific traits.

All the tools used for communication are valuable, especially for specific communication, wherein the team can select the most fitting one. However, the wide selection of tools might be a bit of an issue for the new comers to the team, since they need to get used to communication via various channels. Also, the telepresence room (meeting room equipped with high end teleconferencing technology) could be utilized more that now, since it allows to exploit a lot non-verbal communication traits.

Overall team cooperation is perceived as very efficient, the team must deal with many international factors as its operations are interconnected with multiple legislations, tax systems, and company processes, to have team members with the knowledge of these specific areas is advantageous and manages the strategy of the team. Besides the above, it is suggested that not

everyone in the team is aware of the extent of their involvement when it comes to team meetings and regular sessions. Preferences differ strongly. New contracts with a vendor team, additional connectivity with an offshore team and developers that are more involved, as well as the new agile framework is effective although time-consuming to adapt.

In communication with users, it is mentioned that the team should differentiate between the communication based on the role of user rather than based on the nationality. The knowledge of them system as well as language skills are generally very different between group of advanced “key users” and basic “end users”. Key users (most skillful users of the system that are engaged in communication with the core team) should be treated more like business partners, as they assist to build the system, on the other hand, the end users should be provided with a comprehensive knowledge base accessible to all, so they can improve their knowledge if they feel obliged to do so. To have team members with a specific language skills co-located with the business more engaged in communication with end users is considered the best strategy to build a bond between users and team; even though this practice does add stress on the individuals that become responsible for such communication.

In matters of corporate work environment, GE is considered by interviewee for a company that despite its size, tends to take a lean approach and tries to reduce unnecessary bureaucracy. Even though that budget cuts can be perceived as a slow down for the team efforts, overall the influence of the corporation is positive – interviewee point out, that it brings a lot of perks for little restrictions. The company is trying to avoid unnecessary slowdowns by various initiatives and budget savings encourage people to think economically in everyday work life.

## 4.2. Description of research findings

As only the most relevant research findings are presented below, they have been divided into two different areas based on the nature of the research, tools and team work organization and the cross-cultural aspect of work.

Both sections are based on the data provided by the qualitative and quantitative research, while the data sources of the findings are noted in the text. The questionnaire provides data for most of the research areas, interviews cover fewer researched areas. However, the interviews cover the selected scope more in-depth and provide detailed and specific recommendations that are utilized in the next subchapter to evaluate the findings.

### 4.2.1. Tools and team organization framework

Tools have been covered in detail in questionnaire, allocating a total of 61 questions. A matrix analysis of the questionnaire records was constructed, ranking the tools by their total score in multiple areas such as: emergency communication, status reporting, sharing of organization announcements, handling bugs/change process, sharing best practices and are as follows (highest score represents highest perceived effectivity = cumulative points given/no. respondents using the tool) in the table below:

Researched tool	Total cumulative score
Face to face communication	35,5
E-mail	32,5
WebEx	31,0
Voice (only) calls	30,5
Teleconference room	30,2
Jabber chat	28,4
Agile Central/Rally	26,7
Colab / Yammer	26,4
ServiceNow	26,0
SupportCentral tools	24,9

Table no. 3 – Tools effectiveness

Source: The author's research

E-mail scored as the most useful tool in cumulative scoring, the number of received emails per day is perceived as unnecessarily high, with some score allocations towards well-balanced and overwhelming:

Perceived amount of received emails	Votes
Overwhelming (too much)	2
Unnecessary high	10
Well balanced	4
Slightly low to be informed enough	0
Insufficient (lack of key information)	0

Table no. 4 – Amount of email communication Source: The author's research



The following table presents the cumulative scoring as to the style of communication team members prefer when communicating with various types of colleagues.

Type of colleagues	Formal	Semi-formal	Informal
Upper management	5	11	0
Direct management	0	4	12
Team members (collocated)	0	1	15
Team members (remote)	0	2	14
Other GE employees	4	8	4
Internalized contractors	0	11	4
External vendor team	4	8	3

Table no. 5 – Preferred style of communication within team      Source: The author's research

The analysis of the structured interviews provides an overview of most commonly agreed topics and most disagreed approaches within the team, with some ideas as how to improve teamwork or various aspects of it.

The central identified points of each section of the interviews, are to be further discussed in next subchapter. The Evaluation is made especially for those statements that offer feasible solutions or suggestions for improvement.

### **Communication tools mix**

The topic of the utilized team tools is one of the most commonly agreed upon sections of the interviews in both positive and negative aspects. Overall respondents tend to perceive tools in a positive way with some exceptions mentioned in the table no. 6 below. The points presented represent the frequency of the same perception among interviewees.

Tools mix is viewed as well balanced, provide employees with a variety of ways to communicate if needed. As mentioned below, the mix includes many specific tools thereby, it is possible to find a suitable method for any type of required communication.

The major perceived complication regarding the tools are the multiple environments used for tracking team work. The team underwent change of these tracking tools and the old one still has not been decommissioned, therefore the actual tracking of work became somewhat chaotic due to fact that there is not a single point of reference.

The principle tool to accomplish work is WebEx, many of its features such as, audio conferencing, screen sharing, remote desktop control and an inherent video system solves many software issues and is paramount for system development. Also, the tool is used by all company employees, thus provides corporate-wide communication.

Statement	Team perception score
Well balanced mix of tools	4
Multiple work tracking tools are a problem	3
WebEx is paramount for work progress	3
Unnecessary high number of meetings	3
Non-verbal traits utilization (telepresence, camera)	2
Jabber chat – multichannel communication	2
Long e-mail instead of another meeting	1
Quick meeting instead of long e-mail	1
Over utilization of chat instead of F2F – if co-located	1

Table no. 6 – Tools mix observations

Source: The author's research

What some members of the team view as a burden is the number of meeting invitations they receive to be unnecessarily high. Interviewees expressed multiple concerns on this issue. Often, they feel that they are invited to an irrelevant session instead of being informed prior as to the content and time allocated to the discussion. Hence, comprehensive email message after the meeting is a better utilization of team resources.

A significant area for improvement is the nonverbal traits of the communication, a lot get lost as not all the team members turn on their camera during the meetings. Besides the camera usage during the WebEx sessions it is also possible to book the telepresence room more often, since the hardware equipment allows the best of virtual communication.

Jabber chat is seen as one of the more beneficial tools in daily communication. It features instant messaging with a built-in screenshotting tool and quick screen sharing feature. This allows to deal with the majority of the usual daywork, and is a good alternative to email as one of multichannel communication tools.

While some view the number of meetings as a negative trait, others perceive long emails as an obsolete way of doing business. A short meeting is considered a more effective to share necessary information with immediate feedback and Q&A option.

One very specific negative trait that was identified during the interviews is the over-usage of Jabber chat. While some team members use it for daily communication, having two colleagues in the same office chatting via Jabber is not considered the best practice for team members located in the same office, since the non-verbal communication gets lost. It might be justifiable in some cases, however unnecessary over usage is also the case with some colleagues.

## Team organization

The most commonly perceived impediment for effective teamwork is related to the previous findings, again the interviewees mentioned that they are invited to irrelevant meetings where their time is not utilized properly. Otherwise, the team organization is perceived as well-balanced when it comes to the structure of regular meetings organized by the team. Comprehensive list of findings can be found in the table below.

Secondly, the most common area of improvement would be to obtain a larger team travel budget, as T&L was reduced to the bare minimum and does not allow non-co-located team members to meet and to build stronger bonds of trust.

The third point is the relationship towards the off-shore development team. While interviewees suggested that it would be beneficial to build stronger ties that enable quicker communication with a better understanding of requirements. Also, the higher level of responsibility may possibly be given to the development team, for them to proceed faster with their work. In the current circumstances, the developers encounter various slowdowns while having to consult their work results with multiple approvers; testing process with business negatively impacts the delivery process, as business is not willing to allocate sufficient time to test if core-team members are not present at the session as well.

The agile framework is mentioned as an improvement to team organization in various aspects, especially to share responsibilities, faster communication, higher delivery value, business involvement and better visibility of the work inside the team. However, some team members that are not located in Prague feel that their knowledge about project and development that occurs in other sites could be better.

Statement	Team perception score
Meeting invitation only for relevant attendees	4
Well balanced rhythm of team engagement meetings	3
Higher T&L budget to improve bonding in team	3
Higher level of trust and responsibility to vendor team	2
Closer ties to development team	2
Agile improvements – shared responsibility	2
Better visibility of projects in other sites	2
Manager is good at getting engaged (deep solving)	1

Table no. 7 - Observations on team organization Source: The author's research

## Organizational matters from a corporate viewpoint

As indicated in the table below, the team has one common concern on membership within a large corporation, and budget cuts. The company, undergoing cost reduction processes, limits unnecessary expenses. The Team is influenced especially in travel expense, and as mentioned, travel is considered as central to improve team organization.

On the other hand, the corporate level of the company is perceived as flexible in matters of bureaucracy and overall organization. Multiple previous organizational improvements were carried out, to relive the employees of unnecessary approval processes, paperwork and organizational impediments. Latest such project is “agile transformation” that team embraced in a very positive manner. Also, the communication culture in the company was highlighted by some interviewees in a positive way, employees are used to communicate across the company regardless of their organization placement.

Among other benefits of being part of bigger international corporation is having access to software tools with non-stop helpdesk service. As well as having access to global human resources market while hiring new employees. Another positive input was possibility of consulting encountered issues with experts from the field that reside anywhere in the company.

Negative aspects of corporation influence include too restrictive IT security policy, that has negative impact on the off-shore development team. Corporate pressure for simplification of the system that has impact on the whole team and represents extra work when maintaining and aligning the system to corporate standards. Some team members may not prefer a flat organization structure that the corporation endorses, many organization levels were removed to make the structure more transparent; however, some employees feel that it is not beneficial when it comes to the actual work environment as they lose the positive aspects of tall hierarchical structure.

Statement	Team perception score
Budget cuts – financial limitations	3
Good corporate approach with less bureaucracy	3
Good communication culture & communication tools	2
Corporate services (24/7 helpdesk, software tools)	2
Possibility to consult experts from other divisions	1
Pressure for simplification of the system	1
Access to global human resources market	1
Too restrictive IT security policy	1
Flat organization structure	1

Table no. 8 – Corporate organization observations Source: The author’s research

## 4.2.2. Cross-cultural aspect of teamwork

The table set below provides the **evaluation of core team cooperation** and perception of other colleagues based on the nationality demographic among each other. The higher the score in individual categories, the better was perceived cooperation in submitted records on five-level evaluation scale (from very good to very poor). US colleagues are included for further reference and comparison with external secondary survey carried out with us team.

The “Overall communication satisfaction” presents two numerical indicators, the first is the average of submitted perceived point and second, is the sample mean of the above stated values to provide a comparison between the *perceived overall satisfaction* and *actual perceived quality of communication* based on the individual categories.

Czech colleagues	Score
Response rate	3,9
Relevancy of answers	4,0
Comprehension of content	4,0
Communication clarity	4,0
Overall com. satisfaction	4,1 ( $\bar{x}= 4,0$ )

Indian colleagues	Score
Response rate	3,8
Relevancy of answers	3,2
Comprehension of content	2,8
Communication clarity	2,6
Overall com. satisfaction	3,1 ( $\bar{x}= 3,0$ )

US colleagues	Score
Response rate	3,3
Relevancy of answers	3,3
Comprehension of content	3,3
Communication clarity	3,3
Overall com. satisfaction	3,3 ( $\bar{x}= 3,3$ )

Polish colleagues	Score
Response rate	3,2
Relevancy of answers	3,8
Comprehension of content	3,9
Communication clarity	3,9
Overall com. satisfaction	3,7 ( $\bar{x}= 3,6$ )

Romanian colleagues	Score
Response rate	3,7
Relevancy of answers	4
Comprehension of content	3,7
Communication clarity	3,4
Overall com. satisfaction	3,6 ( $\bar{x}= 3,7$ )

Turkish colleagues	Score
Response rate	3,5
Relevancy of answers	4
Comprehension of content	4
Communication clarity	3,5
Overall com. satisfaction	3,5 ( $\bar{x}= 3,75$ )

Table set no. 1 – Evaluation of core team cooperation

Source: The author's research

The above findings are not cross-verifiable with the interview results as this particular topic was not covered in the interview questions. Therefore, research findings of this subchapter are evaluated individually.

The specific areas of improvement were selected with various values; however, the selection was optional and as it was not scaled selection, there is no possibility to make averaged scores, the values are related to the actual number of submissions and co-workers to specific

nationalities. Hence, the following table provides a ranked selection while **the lowest values represent most selected area of possible perceived improvement** and vice versa.

Area of improvement	Czechs	Indians	Poles	Romanians	Turks
Task prioritization	2-3	2	1	1	1-2
Positive attitude	1	4-5	2	4-5	N/A
Time management	5	4-5	3-4	2	3
Direct approach	2-3	1	5	3	N/A
Team encouragement	4	3	3-4	4-5	1-2

Table no. 9 – Perceived areas of improvement

Source: The author's research

The last set of tables in this section provide statistics from the external US team, that is organizationally connected to the researched one. The following table provides valuable data for the adjustment of future communication between teams and offers insight on what *kind of communication colleagues from the US prefer* and hence, can improve the initial communication habits towards better understanding.

Communication tool (US Team)	Total cumulative score
Face to face communication	31,4
Voice (only) calls	27,9
Email:	26,3
WebEx	25,6
Jabber chat	24,2
Agile Central/Rally	24,0
Teleconference room	23,1
Colab / Yammer	18,4
ServiceNow	18,3
SupportCentral tools	16,8

Type of colleagues (US team)	Formal	Semi-formal	Informal
Upper management	5	11	0
Direct management	0	4	12
Team members (collocated)	0	1	15
Team members (remote)	0	2	14
Other GE employees	4	8	4
Internalized contractors	0	11	4
External vendor team	4	8	3

Table set no. 2 – Communication preferences of US team

Source: The author's research

These tables are further analyzed in the upcoming chapter and are compiled and combined to form research outcomes based on both parts of the analysis.

An analysis of the structured interviews provides an overview of the most commonly agreed topics and most disagreed approaches within the team, with some ideas on how to improve the teamwork or various aspects of it.

### **Nation-centrism of the team**

This area represents the most disagreed points of views from all members (Table no. 10), while the slightly larger share of interviewees identifies the team as not nation-centric. The rest feel that since management is Czech and team headquarters is in Prague, gives the team a Czech centered way of working.

There is common agreement on the importance to conduct all work-relevant communication in English. The perception among interviewees is, that team excels in this area and allows everyone to participate in team activities and contribute to the workflow when needed.

Another influential factor regarding nation-centrism in the team is indisputably the fact that the size of two biggest nationality groups, Czechs and Indians, outweighs other nationalities by 3:1 hence the perception of “two poles” in nation-centrism.

Regardless of the nationalities, interviewees also stated that the teamwork is not nation-centered but rather “process centered”, meaning, that there is no emphasis on any nation-specific organization, but the whole team is based on processes and following them. This is perceived in a positive way, as it promotes balance and removes biased behavior.

Statement	Team perception score
Non-nation-centric team	4
Decision making done in Czech headquarter office	3
Importance of working in English language	3
Two strong groups – Czechs & Indians	2
Processed based team organization	2

Table no. 10 – Observations on nation-centrism of the team      Source: The author’s research

## Cultural composition of the team

The most commonly agreed upon point of view in the team is the embracement of cultural diversity. The team perceives it as its strength and even though there are some perceived associated slowdowns, the cross-cultural factor of the team is considered an advantage.

The rich cultural structure of the team is also perceived positively as it brings a wide range of experiences. These experiences and knowledge of the local business and cultural background are paramount for success to build a relationship with business partners and is appreciated.

If the cultural composition of team could be somehow improved, it would be by either by getting a new team member from US or from Europe. New US colleague would be more preferred option among interviewees, since the team is placed under US leadership, it is presumed that having someone with deep knowledge of US workstyle would be useful for establishing the relationship with new leadership. Also, hiring some European developers would ease up communication with the users. The language barrier is currently somewhat present at both ends of communication channels. Hiring someone with knowledge of local or new language is also considered option, since the local language skills are considered for a key in establishing strong bonds with users and business.

A suggestion to establish team members' rotations was also made with the assumption it would enable knowledge sharing and interpersonal bonding in a long-term manner that would benefit the team.

One of the interviewees mentioned that the cultural composition does not influence the way the team works and suggests that the team is strictly skill based and the cultural structure is not a factor to be considered.

Statement	Team perception score
Positive approach towards diversity	5
Diverse range of experiences	3
Getting team member from US	3
More European developers	2
More native speakers to relevant businesses	2
Rotation of team members	1
Skill based team without cultural factors	1

Table no. 11 – Observations on team cultural structure      Source: The author's research



## Communication towards users in general and in specific countries

The team should focus on developing closer relationships with business and users. This is a central factor to improve overall communication. Once the closer ties are established, it is possible to switch to an informal communication and reduce the time and effort spent on forming the formal communication structure. Closer ties also help to build up tolerance for possible miscommunication or failures to deliver a desired outcome.

Also, while communicating with business partners, it is mentioned that showing appreciation of their work is beneficial for long-term cooperation. This is complementary with the above stated and encourages users to be further involved in building the system.

As for the basic daily communication with end users, it is helpful to engage local team members if the work encounters slowdowns or a slow response pace. This method is complementary to the first paragraph as well.

However, some users and business partners became too familiar with the business-friendly treatment and therefore, became very demanding when it comes to receiving attention from the team. Some tend to push their requirements above others, even though it is not justified by financial or compliance means. This is especially the case of Czech business as it is co-located in the same office building as the core team.

Another factor that would presumably assist to establish a good relationship with users and hence, improve the communication is an accessible knowledgebase with all the information regarding the system. It should contain all the valuable information and be accessible to anyone who would find it beneficial.

Other suggested ways to improve communication include the implementation of translation software to mitigate the language barrier, build a communication strategy based on user and business partner skillset. Also, contacting users by telephone calls that are not scheduled before hand, since it represents a very direct approach and shows interest of the team in the issues that users deal with.

Statement	Team perception score
Developing close ties to business and users	3
Appreciation of business engagement and work	2
Getting someone on-site to reach out to users	2
Elimination of privileges for some sites	2
Wide and accessible knowledge base for users	2
More reaching out to users using unplanned calls	1
Using translation software in some cases	1
Differentiate communication based on skill of users	1

Table no. 11 – Observations on user communication      Source: The author's research

### 4.3. Evaluation of findings

The following subchapter is divided into three parts, focusing on selective findings in two main research areas and the final part presents comprehensive findings of the whole research. Only relevant and feasible findings are evaluated, since some of findings are off-scope.

#### 4.3.1. Tools and team organization findings

The following areas are the most commonly mentioned in the overall analysis of the results, both from the questionnaire and interviews. The main points from the aggregated data as summarized below in the form of statements. The statements are further substantiated by comments and explanations.

**Well established processes.** Overall communication tools mix, provides the team sufficient means to communicate and hence, take work further.

***Team processes are the strongest characteristic of researched team.*** The team is dependent on them and sees core value of their identity by following them. Well established processes allow the team to work in a turbulent environment that is influenced by countless externalities.

***WebEx is a paramount tool to get the work done.*** Its main value lays in its accompanying features such as, video and audio conferencing, screen sharing and screen control. The tool is used throughout the company, hence allows to get connected on a virtual level with every employee.

***Style of communication is understood inside the team*** and in its close surroundings. Up to 90% of team members prefer an informal style of communication within team, and the rest, prefer semi-formal.

***Agile transformation and way of work is embraced*** and seen as positive. Despite complicated implementation and complex decommission of old processes, the team perceives value in the new framework. Feedback from users, visibility and team members' engagement improved significantly since the implementation.

***Team identifies with corporate organization in a positive way.*** Despite budget cuts, the overall impression is positive, the company constantly diminishes bureaucratic process and provides access to wide corporate HR resources and knowledge base and gives strong software tools background with support module.

## **Areas of improvement**

The following observations arise from team members themselves, since not all the factors of team cooperation can be influenced by the team, only the relevant ones are discussed.

***Reduction of email communication.*** 75% of the respondents declared that the number of received emails during a usual business day is too high. The rest consider the amount as being balanced. The team shares the majority of information through emails that is considered as one of most effective means of communication, and is untestable. However, one of the team policies is to read received emails. Therefore, every team members spends a considerable amount of time dealing with received mail. Thus, only the relevant information should be distributed to relevant receivers.

***Utilization of nonverbal traits*** of communication is not considered as ideal. Members do not utilize all the possible features of web conferencing. There is no policy in place on camera usage while conferencing as well as booking the telepresence room is not a usual practice.

***Number and invitees of organized meetings*** are a main area for improvement, since over half of interviewed team members see this practice as not properly established. Members are invited to irrelevant meetings and some are used to send out meeting invites for topics that could be solved via email while not consuming time of their coworkers.

***Team should have unified way of communicating with vendor team.*** Respondents do not have a clear idea as to what style of communication should be used that diminishes the quality of communication between core team and external vendor team.

***Integration of work tracking environments and decommission of old processes*** remains a technical liability after the agile transformation. It is difficult to facilitate multiple tracking tools and the team spends considerable effort on keeping tracking up to date. The decommission of the old processes should facilitate the situation.

### **4.3.2. Cross-cultural findings**

**Well established processes.** The team considers its cultural diversity as its main strength and embraces both the associated perks and challenges.

***Importance of communication carried out in English*** is a key positive aspect that keeps all the members informed and in the picture regarding team processes and allows for everyone to step in or take over when necessary. This is especially important considering that the team operates in multiple regions and different languages.

***Team members located with business assist to build ties with users*** is one of the central initiatives currently carried out by the team to improve overall cooperation and customer satisfaction. Team was able to bring in team members that command local language and hence are able to communicate in a very direct way when needed.

***Team considers diversity for its main strength and benefit*** not only cultural diversity. The team also appreciates the diversity in education and professional background. There is a working mix of members with doctoral degrees in informatics as well as bachelors in corporate finance; as well as members with very little professional experience to senior experts. The team is aware of this structure and take it into account while working on projects.

***Perceived and actual communication clarity is same.*** Overall perceived clarity of the communication is the same as the one provided by the data analysis. Hence, the team members do know what to expect from their colleagues when it comes to comprehension of the content and mutual understanding. They can either count on complete alignment or be prepared for further clarification.

### **Areas of improvement**

***Task prioritization is a main improvement area for all the nationalities*** as proven during the research, as team members suggest area of improvement it is task prioritization. It scored no lower than the second priority regardless of the nationality. It is area that the team should focus on.

***Response rate should be improved among European team members*** since it cumulatively scored as the lowest in the research, with the expectation that Romanians are the lowest rated in common team communication for all European team members. The response rate is the strongest in communication among the Indian colleagues.

***Decision making is Czech centered and rest of team does not feel empowered*** even though empowerment is one of central aspects of the agile framework, the team does not perceive that within the Prague headquarter office, there is no one who would be able to decide the team direction. This is considered a demotivating factor, as some team members feel that their experience and knowledge is not utilized to its best and lose motivation to be engaged.

***Establishing of closer ties with off-shore team*** is closely connected to above mentioned point. Core team members and the off-shore team both feel that cooperation would be improved in the off-shore team if it would be more involved in the processes and given a higher level of responsibility. This would permit core team members to allocate their time to other work tasks while the off-shore team would be less restricted in matters of decision making.

***Onboarding of new team member*** would be a welcomed addition for many reasons. One it being mentioned above, the diversity. It is perceived positively by all the team members. Based on the research outcome, a new team member would be most appreciated with either a US or European cultural background. In the case of US, to establish closer ties with the American leadership team, in case of the European, to enable to build stronger ties with one of the European business units thanks to language skills.

### 4.3.3. Comprehensive findings

***Team structure*** on both cultural and skill level is balanced and positively embraced. There is a slight polarization between the two most populous groups, Czechs and Indians, and between the core and rest of the team. However, these are usual traits of any such composed team. It may be concluded that the team has taken the right approach to focus on individual skills and processes, as it enables everyone to operate smoothly.

***Communication and virtual tools mix*** is accepted and team members know how to utilize except for non-verbal traits and the necessity to remedy the technical shortcoming. Email communication is most effective; however, team is overwhelmed by the number of messages.

***Team organization is good and effective*** despite a high number of meeting invitations and distorted work tracking. Otherwise, the team embraces the agile methodology and sees value in the new processes.

***Communication towards business units and users*** has recently improved thanks to onboarding of new members with a command of local language. This initiative has received positive feedback from end users and is seen a way to handle this area of team communication and organization.

***International corporate structure*** provides the team access to resources that smaller businesses would not be able to provide such as, knowledge base of experts and the ability to hire employees across the globe as necessary and the non-stop helpdesk. The team does have to operate with a limited budget especially regarding travel expenses that impedes closer ties within the team.

***Team is demographically diverse, but knows to operate with it*** in most cases at least. Team members are usually well educated or have experience in the IT industry. Therefore, everyone is aware of the tolerance that is required in the multiple tasks of everyday work and communication.

***Team is not influenced by its cultural composition to higher extend*** even though that it rich cultural diversity could suggest otherwise. The research has proven that there are other more influential factors than mix of cultural backgrounds.

## 4.4. Recommendations based on findings

### **Adjustments to communication strategy of the team**

***Reduction of meeting invitations*** – research indicates that the perceived number of meetings is too high and that meetings do not utilize participant time efficiently. Possible reasons for this organizational failure might be a misinterpretation to keep all the relevant stakeholders informed or negligence of the meeting organizers. While the first could be easily solved by management action i.e. to establish clear rules as to when people should be invited to meetings or when they should be just informed via another communication channel. The second might be deeper rooted into teams' behavior, negligence in meeting organizers could arise either from not realizing that some participants might not have value to attend the meetings or organizers might see it as an easy way to avoid sending meetings minutes or summaries using email.

Once the team embraces new practices to hold meetings, it would be necessary to meet organizers to adopt a new model of information sharing. Informed team members are still key and desirable element of teamwork; the new model should emphasize delivery of all relevant information to relevant receivers in an understand and most importantly not time bound form. Hence email template or some sort of regular meeting minutes' message seems like a most suitable solution, however that could result in even higher number of received emails per day.

***Transfer of information sharing outside regular communication tools*** – solving team members' awareness using email might be the easiest solution to implement, however it would further worsen the message overload that team members perceive now.

A possible solution would be to keep all the stakeholders informed and move all the relevant information to external access point. In this case, the obvious choice would be the company intranet that allows to share all the necessary information with anyone required. However, the company intranet scored at the very bottom of all the researched communication tools, therefore, it would not provide desired value. Another option would be to deploy a new solution that is specifically designed for such information management. This solution would bring optimal results in matter of information structure, accessibility and relevance. On the other hand, it would be difficult to implement it and push it as main communication channel. Hence selection of such tool would require further discussion with the team and more complex decision making process based on more inputs.

***Restructure the communication mix*** – the research claims that a "Support Central" tool is least preferred communication tool; hence it would be feasible to replace it with another tool as mentioned above. The tools are dated and meanwhile the company launched multiple solutions that can replaced desired functionalities with ease and better perception from users.

## **International aspect of the team**

***Keep the team focused on processes*** – since the research suggests that despite a rich cultural mix, the team is still process based and does not have to deal with obstacles that arise from culturally mixed team members. Actual recommendation is to put cultural diversity on display as often as possible and keep everyone reminded of the fact. This way everyone maintains their level of tolerance high and focuses on processes and are not caught up in cultural differences. The diversity is omnipresent so that none of team members has a need to challenge or change it in any way and therefore, they embrace it.

***Onboarding of new members*** – appears to be the most reasonable approach to ensure the appreciated cultural diversity. The team is already in a state wherein adopting another nationality would not have much of an impact on how things are done. The new member could bring value especially in knowledge of local language that would allow team to build stronger ties with local business units and users. Another option would be to hire new member in the US, cultural inputs from the new American member would help the team to grow closer to the American way of doing business and hence, mitigate risk to encounter misunderstanding of communication noise between US management and the researched team.

***Establishing of rotation program*** - that would allow to allocate team members to different offices for a short or mid-term period. Such a program would enable knowledge sharing and interpersonal bonding at the highest level, while improving overall interconnection of the team. The major roadblock for establishment of such rotations would be budget limitations, since temporary relocation of employees requires significant financial resources as well as engagement of multiple HR departments and related management representatives. Regardless of budget and organizational restrictions, this solution represents the best way to improve key aspects of team cooperation and customer communication. Even though suggested rotation might not be feasible as of now, they have proven themselves useful in the past and hence are the top recommendation for improvement in the future.

#### 4.4.1. Team improvement action plan

Following points represent specific action items that can be taken without any long-term preparation and impact the actual improvement areas that the team should target.

***Creation of communication plan for US colleagues.*** The research highlighted that communication with the new US leadership team is not on the desired level and expressed concern as to the proper way to approach this cooperation. Subsequently, building a proper communication plan with the assistance of someone knowledgeable of the targeted team is paramount to improve recognition among the new leadership and render a positive impression.

***Elimination of privileged business treatment.*** The business unit co-located with the core team are used to above-average treatment at the expense of other business units. A normalized approach should be established to allow the team to conduct work in the most effective way.

***Establish communication and inclusion plan for vendors,*** since in the current situation, the team is divided when it comes to the communication style with vendors causing miscommunication. Also, the vendors should be more included within the decision-making progress; however, this cannot be done at will. This change would have to be driven by managers to meet compliance requirements and not to lose control over the projects.

***Establish rules for web-cam usage.*** Face to face communication is considered the means to communicate especially due to nonverbal traits. Therefore, team members should be obliged to utilize virtual tools to their fullest, in this case it would be beneficial to establish rules on camera usage. Nonverbal traits could then be observed to improve the clarity of communication. The team possesses the necessary hardware equipment but tends not to use it. This action plan item could be carried out simply through a management directive.

***Migration of old processes from not preferred tool to new one.*** One of the tools scored significantly lower than the rest. The tools can be replaced by other solutions such as recent technology perceived better by the users. The migration of the process would require mapping and additional functionality design in a new environment. Both tools are built as self-service for users, and would be possible to execute this using team resources in a short to mid-term period.



## 5. Conclusion

The research was conducted based on its design and provided inputs to most originally stated research questions. Gathered research data met the intended topics, except for response rate of second questionnaire distribution phase that failed to deliver desired inputs. Besides the external view on the team from US colleagues gathered data have given comprehensive view on perceived cooperation within the team, perceived efficiency of communication and processes followed by the researched team. "

The quantitative analysis also provided the baseline for a wider analysis of the team communication strategy and habits maintained by team members. In doing so, permitted to analyse possible impacts of cross-cultural team structure. However, this is not the case of the research team, since the research has proven that cultural composition of the team has very little influence on the team work. Therefore, the cross-cultural section of the research did not deliver any nationality related recommendation besides list of possible improvement areas.

Analysis of the software tools mix utilized by the team has given multiple suggestions for optimization. Whereas, the most desired ones are the clarification of communication strategy regarding number of meeting invitations and amount of received mail.

The interviews supplied valuable data that allowed to build up list of recommendations and action plan for team cooperation improvement. Also, interviews provided valuable insights on how team members perceive their team in the context of a large international corporation.

The second phase of questionnaire distribution failed to deliver the desired outcome, however provided inputs to build a possible communication plan towards American colleagues. Closer interaction with the US team is one of most desired goals both for management as well as for other members of the research team.

Other areas that were covered by this research include deep analysis of communication improvements with relevant business units and users, ideas for organization hierarchy improvements, style of communication with diverse groups of coworkers and numerous organizational and communication suggestions.

The topic has proven to be encouraging for further research especially in matters of widening the research scope to a broader segment of the company. A wider scope would possibly allow to analyze trends in the whole departments and hence provide more representative findings.

## 6. The Need for Future Research

As discussed above, the topic of teamwork in international teams that work in a virtual environment, utilizing agile framework provides a combination of various aspects that interact and if researched separately may not provide a comprehensive and complex image of the relevant factors. This research area delivers possibilities with a high potential for both application in practice and academic value. These trends are standard in a growing number companies and industries.

Further research could be conducted using the same or comparable baseline as the present. GE proved to be a research-friendly organization with numerous inputs of interest. The company utilizes all the necessary factors that define a research scope and due to its size represents an ideal candidate for deeper research with more employees.

The research scope may be enlarged to a statistically valid number of respondents and provide applicable findings for one or more of researched areas. The scope itself could be enlarged to include another department, division or the entire company. If the scope is widened, interviews may possibly lose value as it would be unrealistic to conduct a sufficient number to match the number of protentional survey records. Therefore, it should be carried out only during the early stages of the research.

Future research could be managed in three phases, while each phase would expand scope of respondents significantly. The target group of the first phase would be GE Aviation IT employees that work in virtual teams and utilize the agile framework methodology. Since the whole IT department underwent agile transformation, a significant number of employees would be suitable respondents for the survey. The questionnaire distributed in the first phase could be detailed with questions specific to the agile environment and framework, that would be incorporated into the questionnaire at the expense of other more general questions to keep the questionnaire short to increase return rate. Collaboration with a group of agile experts should also help to increase the return rate and to distribute the survey to relevant respondents.

The second phase of the questionnaire would be directed to all employees in the GE Aviation IT department, regardless of their work. Distribution of survey would be coordinated through multiple company communication channels, internal websites, Yammer social networking sites and through personal communication with relevant IT team coaches.

The third, planned phase is aimed to include all employees of the company. Distribution will be done through similar channels, however, to all employees of the company and not just selected ones as in the first and second phase. The questionnaire would include a set of questions where the content would dynamically change based on the selected options. The total number of questions for the final respondent is therefore, significantly reduced and only relevant questions are presented, i.e., the same as in this current research. As the relevance of responses

towards the research topic will decline in each phase of the research, the use of data from the last phase of the research is mainly for analysis of software tools usage in general, as well as for demographic data, and to analyse the perception of international cooperation in general with demographic data included.

Another set of inputs are structured interviews, the team surveyed within this diploma thesis has already provided a certain number of interviews, therefore, there is already a certain data base. However, it would be optimal to build a new interview structure that would be more extensible and applicable in phase one of future research. The structure would duplicate the questionnaire survey to obtain more connected and relevant data. There is also possibility to engage another interviewer that would be able to connect with colleagues that otherwise would be very difficult to become involved.

Another possible data source would be panel discussions and simulations. These research methods would be conducted in a closed group of corporate coaches within Agile Council. This "agile council" is an expert group of employees who are responsible to manage and improve work in international virtual teams and to implement and improve agile team management methodologies. The agile council is further divided by regions, the European, Indian and partly Asian branch are already active in the research fields; they would most probably be supportive for further research as well, the North American branch is also very likely to participate at least partially.

Further research of this area with GE is encouraged. As an employee of the company, there are no known impediments to do so. The possible future restriction may be the necessity to consult a company compliance officer and possibly legal counsel, in the same way as it was done for this research, as to the publication of results and findings.

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## 8. Appendix No. 1

### Communication tools

Below is the list of most common means of communication in GE, we would like to learn more about them and the way how you use them.

\* While working within GE I use following tools: ☹

- ☒ E-mail
- ☐ Jabber chat
- ☐ WebEx
- ☐ Teleconference room
- ☐ Voice (only) calls
- ☐ Face to face communication
- ☐ ServiceNow
- ☐ Colab / Yammer
- ☐ SupportCentral tools
- ☐ Agile Central / Rally

#### Urgent/ emergency communication ☹

How effective do you consider Email for urgent/ emergency communication? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

#### Status/ progress reporting ☹

How effective do you consider Email for status/progress reporting? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

#### Sharing organizational announcements ☹

How effective do you consider Email for sharing organizational announcements? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

#### Handling system defects/ bugs ☹

How effective do you consider Email for handling system defects/bugs? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

#### Change requests/ process ☹

How effective do you consider Email for handling change requests /process? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

#### Sharing best practices ☹

How effective do you consider Email for sharing best practices? ☹

- |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extremely effective   | Very effective        | Moderately effective  | Slightly effective    | Not at all effective  |

## Team communication

Results of our communication vary depending on the tools we use for it, as well as on the fact if our team is co-located or distributed. Following questions will help us to understand how you perceive usefulness of selected means of communication.

How do you rate usefulness of Email for general daily communication within company? ☹

- ☐ Very good    ☐ Good    ☐ Fair    ☐ Poor    ☐ Very poor

How do you rate usefulness of Email for communication with your LOCAL colleagues/team? ☹

- ☐ Very good    ☐ Good    ☐ Fair    ☐ Poor    ☐ Very poor

How do you rate usefulness of Email for communication with your REMOTE colleagues/team? ☹

- ☐ Very good    ☐ Good    ☐ Fair    ☐ Poor    ☐ Very poor

\* The amount of e-mails you receive during usual business day is: ☹ ☹

- ☐ Overwhelming (too much)  
☐ Unnecessary high  
☐ Well balanced  
☐ Slightly low to be informed enough  
☐ Insufficient (lack of key information)

## Style of communication

**Formal** - official, polite, strictly business-based, distant.

**Semi-formal** - first name basis, business topics kept with personal views, somewhat distant.

**Informal** - friendly unstructured communication, personal opinions and views are widely accepted.

\* What style of communication do you prefer while talking to your direct manager? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to upper managers (2 or more organization levels above)? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to internalized contractors? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to external vendor team? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to other GE employees you are not familiar with? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to members of your team (same location)? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

\* What style of communication do you prefer while talking to members of your team (remote location)? ☹

- ☐ Formal    ☐ Semi-formal    ☐ Informal    ☐ Does not apply

## International teams

Please note that this part of the survey is mainly focused on Aviation division in Europe, therefore the selection of following countries. Never the less if you work with colleagues from one of following countries please fill the questions out.

\* As a part of your agenda you work with coworkers from following countries: ☹

- ☒ United States of America  
☐ Germany  
☐ India  
☐ Poland  
☐ Czech Republic  
☐ Italy  
☐ United Kingdom of Great Britain and Northern Ireland  
☐ Romania  
☐ Hungary  
☐ None of above

## USA

While working with coworkers from United States, how do you rate their overall response time? ☹

- ☐ Very good   ☐ Good   ☐ Fair   ☐ Poor   ☐ Very poor

While working with coworkers from United States, how relevant are their answers to your questions? ☹

- ☐ Very good   ☐ Good   ☐ Fair   ☐ Poor   ☐ Very poor

While working with coworkers from United States, how do you rate their comprehension of content? ☹

- ☐ Very good   ☐ Good   ☐ Fair   ☐ Poor   ☐ Very poor

While working with coworkers from United States, how often it is necessary to have follow up for clarification? ☹

- ☐ Very good   ☐ Good   ☐ Fair   ☐ Poor   ☐ Very poor

While working with coworkers from United States, how do you rate overall satisfaction with communication results? ☹

- ☐ Very good   ☐ Good   ☐ Fair   ☐ Poor   ☐ Very poor

What areas of improvement do you see while working with coworkers from United States? ☹

- ☐ Task prioritization  
☐ Positive attitude / friendliness  
☐ Time management  
☐ Direct approach  
☐ Team encouragement

## Demographics

In order to help us understand the way work even better, we would like to you to fill out following demographic data. Survey remains fully anonymous even after submitting following demographics.

\* What is your age group? ☹

- ☐ 18-26  
☐ 27-39  
☐ 40-59  
☐ 60+

\* Please select your gender ☹

- ☐ Female   ☐ Male

\* What is your professional band? ☹

- ☐ PB   ☐ LPB   ☐ SPB (and above)   ☐ Not available

\* What is your level of formal education? ☹

- ☐ Elementary  
☐ High School  
☐ Associate degree  
☐ University (Bachelors degree)  
☐ Postgraduate University (Masters degree)  
☐ Doctorate degree

\* What nationality/culture do you identify yourself with? ☹

## 9. Appendix No. 2

### 9.1. Czech Manager interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

**A:** In my opinion, working in such a diverse team and with various nationalities represents one of most interesting challenges in our cooperation. However, it is necessary to take into account the business and the customers we work with. Our end users are located primarily in Europe; therefore, I can imagine that there is a space for improvement if we would be able to increase number of European team members and consultants rather than the ones in India. It is dependent on the mind set and cultural background of our Indian colleagues, this thought is mainly based on the feedback provided by end users, while most of it was negative towards our team located in India. In most cases the negative feedback is based on the same complaint – Indian team is not able to ask necessary questions and is unable to have follow-up for clarification if necessary also, they are not able to go into conflict like situation and therefore the topic is not discussed deeply enough. That results in many various issues especially multiple miscommunications etc. Therefore, I believe that the team should be European, located in same time zone and with same cultural background. Also, the overall approach to work is different with Europeans, compared to American, Asian or Indian cultures.

**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

**A:** Based on my previous experience working in other cross cultural teams, this team is the most culturally diverse one. Almost every part of the globe is represented in the team in some way, apart from Americans. We have team members from Europe, India and Asia therefore the mix of cultural background is very diverse. I think, that this gives the proper balance and equilibrium of the best that each culture can provide for the team. This is also dependent on the skill set of each individual and I think, the team is consisted of the best Oracle experts and consultants that we could find. Team members are loyal we support each other. What comes as an advantage is, that the team members can learn from each other cultural background and they learn how to perceive the cultural differences in their personal lives as well.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

**A:** I think that we have a lack of personal communication within local team. Everyone is busy and they rather use tools that are meant to be used for remote communication with not collocated team members. Especially communicating via chatting app between team members sitting in the very same room few meters from each other.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

**A:** Basically, any corporate directive. We are part of big corporation and as one of many subsidiary companies, we do not work in environment with unlimited resources and in ideal organizational structure. That prevents us from showing our full capabilities and creates impediments in the matters of adding the value to end customers. So, the main issue is lack of resources, both the financial and capacity ones.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** I think the key element for us is the office environment. The environment what we have now represents a barrier for any personal communication, that is something that I would like to improve in the future... change the location of the office to get us working as a team and to remove the communication barrier we have right now.

## 9.2. Indian chief manufacturing specialist interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

**A:** The way our team works does not really provide good mix and utilization of what each of can offer for the common goal. Based on my previous experience, I had working abroad, our team stand out as unnecessary Czech centric, while the big issue might be the workload we are experiencing now, there is not even enough time to appreciate each other and our common work. Also, the Czech tend to be grumpy at certain aspects of cooperation or perception of what we do. We somehow have this clash of cultures – when we have a Czech team that is somewhat “core team” and then we have rest of the team – Indians, Romanians and Poles. Even though that there are efforts how involve others to our daily agenda I don’t think that we are very successful at that. I think that there is this necessity of regular at least one hour meetings to get others really involved. Also, from my personal experience in consulting, the faster and the quicker you can actually know a person - not on a personal areas level but you just have to somehow associate to a person and at the moment you do that, the faster you do that the easier the life becomes to get things done. I know, that it is not everyone’s cup of tea to get to know someone quickly close to someone or start being friends with your business. The moment you can sort of get to that level, then you know, you do not have to send official emails, you know you do not have to wait for the reaction of the person to take agenda forward, you do it, because you know it is ok with business. Bonding is therefore paramount, meeting the people and talking to them, that’s where it all starts, it helps a lot. It helps infinitely, so there is no replacement for this kind of association. If you are limited by budget and you can’t do face to face kick off – you need to somehow show to colleagues, that what they are doing is really valuable, and their knowledge is really usefully and it is something that IT can’t simply replace. It could be just a simple greeting on the call, small appreciations for the work that people do, It makes half of the needed effort done, the person is encouraged and pumped up that gives them confidence, there are soft skills that are very helpful for managing cross cultural teams, no matter the mix of nationalities. Unfortunately, there are people, who have no idea how soft skills words and they miss the whole part of the story. In my opinion it would be good to bring somebody from abroad, from US for example, to come down here, spend a year to see how we work. Then we perhaps would be able to pick up some things from him or her, on how they work, it would be useful because this is an American company and everything is driven from US, so I think it would be good, to get that perspective. I’m struggling right now with one of my projects for example, we are used to these new projects where we just have control, there is a fixed plan how to do things and consultants are bound by it. Americans on contrary are complexly relaying on the vendors and not question them at all what they would do. We have a team a of 15 people travelling to small facility and we are not prepared at all and I’m concerned that just will end up with 15 faces sitting in a room without defined purpose. But maybe this the American way of doing things...



**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

**A:** I don't think it is nation-centric in anyway, what I see is polarized team. There are two poles – we have got the Indian side of the things and then we have the Czech side of the things. So, I would not say it is run in the Czech way, I would say it is run in a quite efficient way (having seen some other teams how they are running the show), this is quite efficient... Is this team centric to one nation, one school of thought? I don't think so.

Since we got our external vendor, I was suggesting as per classic approach to sourcing, to get some of the senior consultants from offshore team to come here, to be onsite where everyone else is sitting for let's say 4 to 6 months and then we would rotate the person. This has been proved methodology for all the big corporates of the world. If you have a support engagement that is outsourced, you rotate resources for six months and this is what I was trying to tell everyone, that this is what we need to do. Because once you see 6 months of someone you associate to them, you don't need to spend hours figuring out how he or she works, you just transfer the message in one tenth of a time. Not just that, the consultant is happy, he has seen the people, the productivity increases... it helps. On the contrary, what we have been trying to do with our vendor for last years is to go for a European consultant, because for some reason, some people think that it makes a huge difference. And for me, that was one of the biggest let downs for us, because we had numerous European consultants leaving for various reasons, so at the end of the day, this philosophy was flawed. The whole idea of having someone European here, managing the team in India did not work. We should have gone the usual way as I suggested earlier. Having the European consultant here, helped... but the global proven methodology of working with outsourced support model is the rotations, we have tried it in a different way, but we were probably not very successful.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

**A:** I'm quite satisfied with the tools and methodology that we are adapting to. I don't think we waste a lot of time on emails, I personally hate the people who write big emails and I believe that it is not just me... writing the big emails is a sham. It is a thing of 90's. But I would not say a lot of us write them anymore, but some of still do, but that is habit so it takes some time to adapt. These days, if we need something, we go on a call and of course that is the fastest way. And what really helps from my perspective is, turning that camera on, it really helps, it brings a completely different picture, so I would absolutely suggest videoconferencing from your table. When it comes to meetings, I just do not join the ones that I don't have to, to avoid spending my time in an inefficient way, I just apologize to organizer.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

**A:** I like agile approach we implemented recently, but I think that the fundamental structure of the team can improve if we incorporate in a hierarchical way based on experience, skillset and so forth, what we have now – the flat bottom approach, to me does not make sense. It is sensible in both ways, how management approaches people, if you have pyramidal hierarchy then of course the knowledge flows from top level to first level and the first level disseminates it. That's the typical way of working, to have it like here (flat) it's far from perfect. And it not the case of country level in general, this country is full of team leaders. It is just in this company – we got rid of this concept of team leader completely and we just got a team and there is no hierarchy... that is something that does not give sense to me. And something I would improve I had a chance.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** Couple of areas which are worth mentioning with regards to organization are: From my perspective, it really helps the whole team if the product knowledge is there at all levels of the organization, so with just managerial skills (it is of course the most important skill to have) but with almost negligible product knowledge – it does not help us, so that would be something that would help us. Second point is that, again it is proven that when you have a team of let's say ten people, it helps to have pyramidal structure it does not help to have flat bottom and then the Everest, if the structure is pyramidal things and the responsibilities flow from the top to the senior in the team and then down and so on... and that how most of the people work, what we have here is completely opposite – we have got a flat plateau where everyone sits and there is just one person above, from my perspective this is not ideal at all... I have raised it in a number of places, but this the corporate, this is a GE way of working so this is something that I would potentially want to change, this does help anyone – because imagine that you have let say 30 years of experience consultant you will be on the same team as a guy two year out of college, so this is something which we really need to somehow work with, which might be acceptable for some, but might not be acceptable to others.. this is something I think if changed might help us, but is a corporate thing, so can't do anything about it.

### 9.3. Romanian IT technical specialist interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

**A:** I believe there is a number of ways you can look at this, for example. One experience that I had – working with the Indians – is that a lot of time, there is a miss communication and this can come from both ways either a lot of times they do not understand properly the meaning of what I can to say and communicative and the other is that their accent or their English is not so good that I can't properly understand, however there are of course exceptions to this and some of our colleagues can account on those exceptions – meaning that their English is quite good and that is not a problem but for example if we would include more other nationalities that do not speak quite so good English that can be a problem in communication but overall I believe that it all comes down to the individual... It is a matter of how good that individual is speaking how good is he communicating and collaborating with his colleagues and there is a fact that more and more English is becoming global language these differences really come aside. I would not say that bringing in other cultures would either improve or worsen the communication or the performance of our team, the main goal is to avoid communication barer in my opinion I embrace cultural diversity, but I would not really count on factor of change if we somehow have different nationalities, it is a matter of the individual.

**Q:** Do you feel that our team is nation-centric in anyway? Does this provide advantages or disadvantages?

**A:** Of course, lot of our member are from Czech Republic, but I do not necessary believe that this is something that can somehow bring better or worse outcome to customers, because we have customers even in the other departments that we work with, so the fact that we have more Czech members I don't think that this can be a factor of let's say improving of worsening the results of our team. I think in the end it is the matter of following procedures and processes, in the end everyone has its own well established role in the team. From the matter of the leadership it is a Czech cantered, but as I said - in the end it is a matter of following procedures and having a well-structured team and in the end, it is good if we have a high-quality response to the end user or the client.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used?

**A:** I have a tendency to believe that we have sometimes too many meetings, and I noticed that in some of our meetings a lot of times many people who would have or not have at some point some feedback would just sit there and not do much, so this is one of the facts that I noticed. But overall I think that we exploit good number of communication tools and I don't

think there is one that should be left out or should not be considered that much or perhaps another one that is useful but used too much I don't think that. Perhaps yammer or Colab are the tools that we use less frequently. But I think it is good to have the option to post and make notification to our followers there as well.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** It would again be the number of the meetings – even if we have many meetings that would not be a problem. But the fact that we have so many people in many meeting and they just sit around and do nothing and often even I myself, find that I starting to work on something or read an email while I wait for my turn to come and often I'm not listening to what is discussed. And if it is more possible have more focused kind of meetings where we invite only the people that are needed or even better idea is to have the meetings split like fifteen minutes you and fifteen minutes with other people, at least for the regular meetings where we know the pace and we know what going to happen and who is going to talk.

**Q:** Do you see any improvement areas when it comes to communication with users/clients from specifics countries?

**A:** I'm a fan of voice call or at least some form of let's say intimate communication, perhaps face to face even. For example, I can imagine situation were the user is notified trough some other means like email or some other communication tools that we have, about the ticket. Some resolution or some feedback that he has to give and I think it would be good if from time to time at least, users can be called directly on their phone. So, if for example we have a user that is having a lot of tickets on its back and he is not so fast to respond to them it would be good, sometimes to include him in the meeting or if not include him in the meeting just call him directly. Of course, we do communicate here with the users but it is good for the user to have that feeling that his role and his feedback is very important for resolving the ticket and for the course of the whole case because many people are working on different tickets. So, I believe that more direct approach with the user/client would be beneficial. No matter the specific nationalities, I believe that this could be applied anywhere. If me as a Romanian would work on a ticket and I would have to get some feedback from some other nationality like from Czech, Turkish or Polish or whatever. Than it would be wise decision from me to pick up the phone once in a while and call the user and talk directly to him, even if I don't give him the heads-up "Hey, I will call you with whatever it is".

**Q:** Do you see any barriers in organizational communication that represent impediment for effective team work?

**A:** No, in fact I think that in GE we have a very wide range of tools we can use and to be frank I think that the communication is going a lot better than many other companies in the

world. So, GE is really one of those companies where communication is something that is happening quite easy or in a very easy way. There is no problem with communication from my point of view.

#### 9.4. Turkish independent contractor interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

**A:** I think it would, initially knowing more foreign languages is an asset and once you hire from yet another country, you have some other knowledge some other culture and you can have some idea about the business and the way of doing for that country also, each state has a bit different mindset and approach to the topics and in our case almost each country has specific team also and having this on the table is the asset for the company. Because if GE is worldwide company it should have worldwide human resources, so I fully support hire somebody from different zones. Actually, our team is well diversified, because I mean our zone for the support if we consider it from that perspective is mainly for the Europeans sites, just Mexico is there as an exception and we have somebody from Turkey, Romania, Poland and there was a guy from Germany during one project...So I think it is fine, I don't think we have someone missing, maybe someone from Italy or Spain might be an asset, but since we do not work with those sites, it is not necessary...

**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

**A:** I mean the management is in the Czech site, and stuff mainly as well but I think that our manager and everyone else manage it fine because they are not using local language for communication and they are going by English in almost all the cases and I think I don't feel any nation centric approach, of cause – maybe a little bit of Czech but I can't that it is hard, so I think everything is normal in terms of that – maybe trans-nation centric I should say.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

**A:** Actually, yea – I mean, our approach is a bit complicated because of the development process we are now using this new tool, but tickets from users are in a different one so if it would be a bit more combined solution it would be better maybe, because we need to work in both environments it is relatively hard to synchronize it. And we also changed a lot of tools in couple of years, so it is also an asset but current tools should be more integrated. So, some more stability in the selection of the tools we are using would be good. As for communication, I think it is good that we have multiple channels via which we can communicate, also it is good in case

one of them get stuck, there is always another way how to reach each other. We are effectively using the mails also, so I don't think that I have further comments about it.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** As a team, we are meeting regularly and the meetings are effective, we are staying in touch as much as necessary, our manager for example, likes to deep dive into the issues, other managers would just overlook the work and schedule meetings, so I can't say any complaints about that. Maybe sometimes we are not aware of what is happening in other sites and countries, it could be a bit better – it is not bad, we have some idea, but maybe we can improve that one.

**Q:** Do you see any improvement areas when it comes to communication with users/clients from specific countries?

**A:** As far as I know, some local users do not have enough English knowledge in every site – not specific to any country, that is my knowledge. And maybe somehow a tool should be used to translate what they wrote down in their own language to English etc. maybe some kind of think like that could be used, but I know it is not easy. Something to help us with the language barrier, because I mean however the GE has intention to keep only the English speakers it is not the case as I observe.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

**A:** Actually, there is a standardization approach for consistency and cost cutting and it completely meaningful but, during these project the cons of trying to be standardized are not very well decided or determined so it costed us a lot of time, but of course it is normal because it is huge process and tasks are divided to many people and that is natural but it could also be somewhat abandoned.

## 9.5. Indian vendor contractor interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

**A:** Depending upon my own experience because I have already worked on projects concerning environment we support from off-shore to other sites, so it depends – in certain situations where we have a lot of language dependency, there are countries like China and Korea where people are completely unfamiliar with the language – there sometime it creates the problem but for of all for us – Indians, who are working in English we do not have any issues communicating and setting up in smooth workspace environment with countries like US or Australia and to some extent Europe also, so cultural diversity actually impacts productivity in a sense like we have a more focus or more productive team members in various countries we can search even further for the resource across the globe. So, in that sense it is nor good or bad it depends on the specific situation. For our current team, in particular I would say that we are good as we are when it comes to cultural mix of team members.

**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

**A:** No, I don't think so, that our team is somehow national centric, but I think it is business centric where the business is – as of now we have multiple countries involved but particularly we are more focused on the kind of business and the process that we are following, so it advantageous only that it is not nation centric but business specified. In aviation industry, in particular so it has advantages only. Well the most of the team members are Czech, the headquarter of our team is located in Prague, then we have our vendor team supporting from India so my perception so far is, that it is not nation centric because people from other countries are involved as well, people from Poland, Romania and India so what I feel is – majority of the people are from Czech Republic but it also kind of mixed team. Even though that by number, the majority of team is Indian, they are not decision makers except for or one or two of the people, most of the Indians work as consultants and developers they do not have much saying to kind of deciding factor and they are not present in decision making room.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

**A:** We have more tools now compared to what we had before for managing all the tickers and all the defects and change requests, so we have multiple new tools that are getting mixed with the older tools. When it comes to doing the actual work, I would say that mail is the key, since most of the communication goes through it, also the instant messaging chat is very important thing, it can get you directly connected but most of all, the most important is WebEx, with share screen that we use quite often to get connected but for reporting and all those managerial things

to some extent nowadays the number of tools has increased so it would be good to somehow consolidate the work at one place instead of many places now what we are doing but we probably can't completely avoid it, since not all issues can be sorted just over emails. But for effective way, my suggestion is to have one centralized tool where each and everything is properly managed. For communication, I would say that the best is email, you can always approach the person via chat or directly call if there is necessity of clarification or certain things.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** What I feel right now is that our cooperation is good, it is more organized than before and we are tracking quite regularly and the progress also is better than the earlier time. So right now, I do not have suggestions because I would say it is going good. Maybe I would suggest to not meet that much as we do now. I'm not quite sure if it is necessary to meet that much often, there is for sure a lot to discuss regarding the progress on the projects, but we need to focus on the development itself. In those matters I like the SCRUM, I think communication and cooperation is improving since we started doing things new way. Things are more organized than before, so in that matter the daily standup helps a lot... still we need to focus on the time duration and to make it in designated time table.

**Q:** Do you see any improvement areas when it comes to communication with users/clients from specific countries?

**A:** Sometimes reaching users is becoming little more difficult, because if user is not responding either to our mail or chat message then there is no point also calling so sometimes these kinds of difficulties are there. In that case, we actually have to depend on our team members and discuss the issue with them, so sometimes the tools do not work as intended, actually getting someone who is closer to the users helps a lot to solve these issues. Also, if communication issues come up, we can report it to product owners or scrum masters during daily standups, and that certainly helps, both to get the communication going and to relieve the pressure placed on development team.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

**A:** Not barriers for effective communication or any kind of thing like that, but yes for particular areas where we are working like GE development setup, we have a lot of restrictions – we cannot store anything outside of GE computer and you cannot delete anything inside, all those things are there, so that is kind of specific to us. So, I would say that having a bit more liberal IT security would make things easier, also if it would be possible to work from home also, but we cannot carry our laptops outside, we have to get a lot of approvals for that, only



after that it is allowed and that is specific to GE – it was advise to follow such rules. Otherwise as a whole I do not see any impediment.

## 9.6. Polish finance specialist interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

I think that it would be good have some of developers in Europe as well, we have a strong team in India; however, not all the users are very good at communicating with them, since there is some necessity of cultural understanding that not everyone is aware of, perhaps the new agile way of doing things could help with that, since the communication will be channeled via responsible people that are closer to the business. Otherwise I believe that we are well mixed team, I think I would also help to have bigger T&L budget, so we would be able to visit each other offices more often, but that idea goes completely against current company goal of cost saving... but maybe one time in the future it would be possible, I think it would be beneficial because it would help us to bond as a team and to share knowledge more.

**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

Well, we do have our kind of “headquarters” in Prague, and we do have a lot of people in India as well... However, this is usual these days... Even in Prague, we have chief specialist who is Indian, and not only that, new technical architect is also member of core and is working from Bangalore... So, the team is not nation balanced or something, but it is definitely not nation centric, especially considering last year, when we hired new people from other European countries as well.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

We have good communication set, maybe we should consider what can be an email instead of meeting or at least reconsider the number of invited people, sometimes there is no value for attendees I think. Sometimes people get invited to discussions that they not part of and just listen to others. Instead they should just receive an email with outcome or decision arising from the meeting. Also, people should be logged to Jabber chat all the time, sometimes people are not logged in and it makes them harder to reach.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

Besides what was mentioned, I think we are doing just fine. The new agile way of work is good, even though that there is some cleaning up to be done when it comes to decommission of the old process, but that is understandable considering how fast the transformation was. Also, the closer the team will get the better, but again, we encounter travel expenses limitation, that would be an area of improvement, before we used to have generous budget, from what I understand now, there is almost no chance to travel at all unless it is critical for project itself.

**Q:** Do you see any improvement areas when it comes to communication with users/clients from specific countries?

All the countries are specific I would say, and luckily each of them has its own people in the team to help with the system. As I said, it is good to be involved in communication between end users and let's say Indians, since there are some confusions time to time, and we as experienced and knowledgeable people of this area of cooperation are able to handle them and clarify the communication, so that is probably the best we can do in all the countries, get more engaged between users and developers and I believe that we are doing it more and more as we are adapting agile way of work.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

We have very limited budget for our non-development activities, it would be nice to have more money in T&L bracket, what we have now, usually gets distributed to trainings and extra paid man-days of development and even though that we at least spend money for training that are long term investment, we should invest in the team bonding as well. On the other hand, corporation in investing considerable amount of money to the business overall lately, and gives us all the benefits of big company, like 24/7 helpdesk and ability to consult our work with professional abroad, so overall, if we would not have to be so budget wise in some areas it would be good; I mean, cost saving is understandable, but I just hope it will go away as fast as it appeared.

## 9.7. Czech intern interview

**Q:** Would changing the composition of the cultural diversity of our teams improve team co-operation? Why and in what way?

I think that our team is already quite diverse, you have people with not only various cultural background but also with various education and professional background. That is definitely something that some of us tend to forget or not pay attention to. Let's say, you are a specialist and you would start a mail chain across the whole team – usually the content of the message is somewhat technical and difficult to decipher and even management has to ask for clarifications. So, my point here is, that cultural diversity brings major asset to our work and is crucial in the area we work in, however people do not really know how to behave accordingly to it. Since we had multiple on-site vendor contractors here in Prague, from nationalities that are not represented as of now in the team, we were able to learn a lot from our Italian and German contractor even during limited time period. So, I believe that bringing someone from another country that is not represented in the team is a good idea, and these days it would be especially valuable to bring someone from US, since we are becoming very closer in the matters of organization structure and we even have direct one level above management in US. Having person from US team on board in our team, and especially if it would be possible to have the person on-site with our core team. I feel that the whole team is kind of used to communicate in a “direct” European way, and when it comes to talking with Americans, they might not perceive it as something positive, and it also works vice-versa, while some of our team members find difficult to attend meetings, where the US folks discuss some issue and they do not express themselves directly so someone might feel that they are slowing down the process. To summarize, I believe that the more diverse the team is, the better, but we also have to constantly put effort into making the communication effective and get most out of it.

**Q:** Do you feel that our team is nation-centric in anyway? Does this advantages or disadvantages?

I would say no.. Even though that most of managerial positions are occupied by Czech people, I would not say that they tend to drive the team in a “Czech-centered way” ... Also, even though that majority of the team is actually Indian I would not say that we are driving our cooperation in an Indian way – there are for sure some exceptions and special approaches that need to be taken into account while having two strong nationalities, meaning Czechs and Indians, but I believe that also due to the fact that everyone in our team is well educated and usually have a lot experience working in an international environment we are tolerant towards each other, respect our differences and try to get best out of each other and also that people from countries that represent less numerous nationalities in our team do not feel left out. I think that it is also good, that everybody keeps in mind that GE is an international company based in

US and somehow try to drive the work in an American style, while our team adds all the various European flavors and Indian spices.

**Q:** Would you personally leave out some of the tools that our team regularly uses? Is there a tool you would like to be used more?

I must say, that even though we use a considerable number of communication & IT tools, I still see value in using all of them. Thanks, a to such a broad selection of tools, we are always able to use most fitting one for the solution at precise moment. It might be difficult for the new comers to get used to all the tools we are utilizing but one you get familiar with them you will find them very useful and you will start appreciating each one of them. I would possibly suggest using teleconferencing room more, since it gives the closes feel to face to face communication with utilization of almost all non-verbal communication traits, however it get a bit difficult to book them and I even remember some of team members getting quite flustered while trying to do so. Anyhow, using telepresence more frequently seems like a good to improve our overall communication and I would definitely suggest getting used to it more.

**Q:** Do you feel that our team is working as it should? Are there any organization improvements that you would suggest?

**A:** All things considered I believe that our team is doing marvelous job coping with all the external factors that influence it. The we work and the very core of our job is determined by the fact that we operate in multiple countries under multiple jurisdictions, tax systems, company processes and in multiple languages. That brings a lot of challenges and I believe that are handling them very well, thanks to our team structure and thanks to facts that we were able to bring new people with specific language skills and knowledge of local business. We are of course sometimes struggling with different expectations of team involvement – where somebody would like to meet less often and others like to have short session every day, that is something that I believe any such diverse and virtual team has to deal with. Overall I feel that we are on top of things, people are getting more connected after we had changed a contract with our vendor and members of development team are becoming closer to our team and almost everybody is giving positive feedback on changes we made towards implementing state of art software development processes. We still have a lot of work in order to get fully familiar with SCRUM and getting used to different work pace, but this is one of welcomed challenges in which I believe sees positive impact at the end, therefore people are eager to learn and take up the processes.

**Q:** Do you see any improvement areas when it comes to communication with users/clients from specific countries?

**A:** This is an area where there is always a lot of space for improvement. I would be quite a long list to name here, so let's not get into it right now, but it would be good to mention some of the most obvious points. I think that it is important to differentiate between the users not only based on their nationality but also based on their qualification and cooperation role with us. We have very experienced users, that literally help to build the system and are pretty much the business partners to us, and then we have end users that are end users. Both groups should be approached differently, while giving our business partners attention and building up strong ties with them. And when it comes to communication with end users it is most important to have a high quality knowledge base accessible to everyone, this way the users can get familiar with the system and related process, and I believe that in the last months we made significant improvements in this area. As for country-specific communication – again, I would say there is a difference in two groups, business partners are usually well used to overall GE communication style and have good command of English, so communication with them is not so demanding when it comes to special approach. However, it is a different story with end users, we encounter language barrier with numerous users regardless of the nationality, therefore I see as a crucial and as a big advantage that we could bring aboard some team members that sit on-site with the users and understand local language, that is a big help and allows us to approach the process differently. Local team members were also able to prepare language specific knowledge base that helped a lot in many cases, on the other hand, I give somewhat higher pressure on some individuals – being the main contact channel for the whole country, but I have to say, that everyone with such responsibility in the team is handling it very well and gives a huge boost to our overall team results.

**Q:** Do you see any organization barriers on Corporate level that represent impediment for effective team work?

**A:** GE as any other big corporation brings a lot of corporate related topics that might somewhat slow down our work, on the other hand I feel that GE has this idea of becoming lean and agile quite for a while now... there were some initiatives like “Fastworks” project management framework and now the full agile idea... People have that idea of avoiding bureaucracy in their minds all the time, so I would say that unless it is completely necessary we are not overwhelmed by senseless bureaucracy. We of course encounter budget savings all the time, but that has a perk of making every individual think economically about their actions and that in the end can come back in other areas of work productivity. Also, being part of GE gives us access to a huge network of contacts and an incredibly big knowledgebase, and that is something to be appreciated every day, same as other perks of being part of a big company. So, I do not see any let downs from corporate side, mostly it is perks we get to enjoy, while paying little back in a form of some restrictions.