

# **The Role of Communication in Maintaining Quality and Timely Delivery of IT Project Activities**

Dissertation submitted in part fulfilment of the requirement for the degree of master's in business administration (MBA) in project management at Dublin Business School in conjunction with Quality and Qualifications Ireland (QQI).



**MBA in Project Management**

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## 1 Certificate of Originality

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written. Further, texts cited are referenced from the original source. No material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

Date: 25<sup>th</sup> December 2019

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SIGNED

SAGAR MANJUNATH

## 2 Acknowledgement

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### 3 Abstract

The main objective of this research is to understand the role of Role of Communication in Maintaining Quality and Timely Delivery of IT Project Activities. Communications play a major role in any project's progress. Communication skills are the main factor for project progress in any successful project where project management seemed to be completed. Therefore, in the case of medium complexity, maintenance project and innovation cycle, communication is very critical. Contact is described as "lively communicator addresses others and wins support," then contact encourages staff and audience as well as accessibility. Internal and external contact are very critical for project success. External communication is related with managing the flow of information or managing communication to satisfy the demands of external stakeholders, whereas internal communication is the interaction of employees inside the project.

The research uses in-depth semi-structured interview, which is a qualitative method. Interviews involved project managers, Business Analysts, Data Architects from different IT organizations. The interviews were conducted through social platforms like LinkedIn, Google forms and then transcribed and analysed according to the thematic analysis. This research heavily focusses on how communication strategies can be effectively deployed in IT Projects?

The researcher through secondary research, which is supported through primary research, acknowledges the need of two important theories that should be acknowledged by virtual team projects i.e. Diffusion theory and communication accommodation theory. Advancement in the present communication technologies such as slack, Ryver, Lync and Zoom has a more profound positive effect in the success and development of effective communication strategies.

In conclusion, the researcher recognizes the importance of having an effective communication strategy to ensure IT projects are delivered in quality and timely manner and how the role of having new tools and technologies in place will help in designing an effective communication plan. The researcher also performs research on the features of some of the latest tools and technologies that are available in market and collects the feedback from industry experts on key barriers that will forbid IT companies to implement these future communication technologies.

**Key Words: Communication Technologies, Stakeholders, Communication Strategies, Diffusion Theory and Communication Accommodation Theory.**

### 4 Section 1: Introduction

The Alphabet was developed by the Phoenicians in 3500 BC [About.com]. The term communication originates from the Latin word *communicare*, which means 'to make

common' and when we communicate with other individual or group, a common understanding is created [Clearly S. (ed.)]. Barrett defines communication as: "the transmission of meaning from one person to another or many people, whether verbally or non-verbally" [Barrett DJ., 2006]. The process of communication is defined as transmission or passing of message or information from the correspondent through a designated channel to the receiver. The process of communication is a type of cyclic process where it starts with sender passing on the information and ends with the sender in a form of feedback.

Projects, as defined in PMBOK Guide, "A project is a temporary endeavour undertaken to create a unique product, service, or result" [PMI, 2013]. Projects are started to fulfil objectives by producing deliverables. Projects are started at all levels of an organisation. A project can involve a single individual or a group of individuals. A project can involve single organisational unit or multiple organisational units from multiple organisations. There are several factors which is important to ensure the project is completed in good quality and timely manner, few key ones are project scope and objective, schedule and risk management, Communications management, Cost and procurement management. This research focuses on how Communications management plays a major role in success of an IT project.

Communication has been referred as a lifeblood by many project managers. It is important for project group members to collaborate, collate, share and incorporate information to define project objectives. Therefore, it's important for group members to understand the process of communication. There are many reasons why communication is required in a project, out of which the key ones are requesting for information, sending information, asking questions, giving an instruction, team building activities or networking [Burke, R. 2007].

Many experts agree that the greatest threat to the success of an IT Project is a failure to communicate with internal teams or external stakeholders, many problems in other areas of project, such as an unclear objectives or unrealistic schedules, indicate problems with communication strategies [Schwalbe, K. P.390]. It is very important that project managers and their team members make communication has one of their top priority, especially when it comes to communicating with top management in the organisation and external stakeholders.

As per PMI, the projects started in IT organization in the past 12 months that were deemed failures, Inadequate/poor communication contributes to **29%** and it ranks among top 5 reasons for project failures. As per PMI, high performing organizations (completes 80% of their projects on time with estimated budgets), create formal communications plan for nearly twice as many projects as their lower performing counterparts (completes 60% of their projects on time with estimated budgets) [PMI, 2013].

The IT field is constantly changing, and these changes do come with lot of new technical jargon, when people like computer professionals try to initiate a conversation with people who aren't great with understanding computer language – This is a group which includes business stakeholders and top management people – technical jargons can often confuse

them and create problems and might have an impact on project. Off course not all computer professionals are poor communicators, but most people in any chosen field will always have a scope of improvement in their communications [Schwalbe, K. P.390].

In addition, many educational institutions who has IT programs, try and teach more technical skills over communication and interpersonal skills. But it's important that these programs also emphasise on teaching soft skills, the reason for bringing up this topic is many recent studies have indicated that IT professionals need those interpersonal skills as much as they need their technical skills. It is very difficult to separate these two skills when working on projects related to IT field. For an IT project to be successful, every project team member need both types of skills. And this can be developed through formal education and on-the-job training.

Studies continue to reflect a high demand for IT employees and the importance of communication skills and interpersonal skills.

According to a 2014 article in the international journal of Business and Social Science:

- Companies are looking of IT professionals with a correct mix of technical skills, interpersonal skills and business skills.
- The most significant non-technical skills are listening, team work, problem solving, the ability to adapt new technologies and languages, time management, the ability of transferring knowledge to application, multitasking, verbal communication, the ability to visualize and conceptualize, "to be consumer" mentality, soft skills, understanding the business dynamics, internal communication and give and take constructive criticism [Schwalbe, K. P.390].
- "The requirement for these non-technical skills is in high demand in some IT organisations indicate that they would hire these individuals with minimum technical skills so long as they exhibit solid interpersonal skills and business skills" [Schwalbe, K. P.390].

The objective and scope of the project should be clearly communicated to each stakeholders and team members. The whole project crew should be able to visualise the end result, in order to work towards a common goal. Hence communication strategies play a vital role in maintaining quality and timely delivery of IT project activities.

There is a significant and substantial quantity of literature available on communication strategies and technologies used for communicating between internal and external teams. Moreover, there are several authors who have highlighted the importance of communication strategies delivering successful projects in IT industry.

Nevertheless, a limited number of studies have been undertaken to evaluate the awareness and attitude of project team members on latest technologies that are available in market for developing an effective communication plan, to ensure the project success by delivering the project in a good quality and timely manner. The scope of this research was limited to IT Companies in Ireland and India.

To summarize, this research is an expansion of previous studies by investigating the awareness and perception of the current communication strategies that are adopted by

project managers in IT industry and also their opinion and awareness of new tools and technologies that are available in market to help design a better communication strategies in IT projects.

## 4.1 Purpose

The aim of this study is to explore the way of communication, for the delivery of the project in IT Industry. The first task of this research will be to review different literatures about project management, then it will be deeper by examining communication and its characteristics in managing projects. Finally, the literatures will be the building block for the interview feedback that will follow in the up-coming chapters of the research.

## 4.2 Research Questions

The research question is the most crucial part of the research. Saunders et al. (2009) argue that the clarity of the research question is determined by the extent to which a clear set of conclusions are drawn from the data collected [Saunders et al (2009)]. Additionally, it is very important to develop a research question that the researcher is interested and curious about it, so that the researcher can totally focus on the research [PMI, 2013].

### 4.2.1 Main Research Question

- ▶ **How communication strategies can be effectively deployed in IT Projects?**

The purpose of this question is to understand how a communication strategy is defined during the planning cycle of the project and what are some of the key factors that are essential in designing an effective communication plan.

### 4.2.2 Sub Questions

- ▶ Is Communication strategy a mandate requirement during project planning?
- ▶ What are some of the best practices while designing communication strategies for IT Projects?
- ▶ Does current communication technologies completely satisfy the key requirements required for developing communication strategies
- ▶ Are IT Companies are open in implementing new communication technology in IT projects?
- ▶ What are some of the future communication technologies that can be used while developing communication strategies?
- ▶ Does your company use any of the below latest technologies for communication strategies? If Yes, please list top 3 features which enables to design better communication strategies?
  - Ryver
  - Teamwork chat
  - Slack
  - Slenke

- Fleek
- Gmelius
- ▶ What are top 3 advantages in project due to implementation of latest communication technologies?
- ▶ What are the top barriers that will prohibit implementation of the future communication technologies?

#### 4.3 Research Objectives:

A research objective is a clear, concise, declarative statement, which provides direction to investigate the variables under the study [Baccarini, 2019]. Research objectives will help the researcher to focus on the study and helps the researcher to narrow down the study to its essentials, coming to this specific research, the researcher would focus on below points:

- Academic theories on Communication Strategies
- Traditional Communication Strategies & Tools.
- Features of future Communication Tools & Technologies.
- Key Challenges in implementing new technologies in IT Organizations.
- Feasibility Study on implementing new technologies in IT Organizations.

#### 4.4 Researcher suitability

The researcher holds a degree in Accountancy and Tax from Ramnaryan Chellaram College of Commerce and Management, Bangalore University, India and has prior experience of working with IT organizations, India. The researcher is presently undertaking the Master of Business Administration (MBA) program in Dublin Business School and will utilize the vast knowledge obtained in the course modules, specifically the modules in Project Management, Strategic Management, International Management and Research Methods for the inquiry. Having worked in IT industry, the researcher has a proficient degree of interest in the subject. This is combined with the knowledge and research skills gained from the MBA program.

#### 4.5 Recipient for this research

The research thesis is submitted as part of the curriculum of the MBA Project Management program at Dublin Business School in association with Quality and Qualifications Ireland (QQI). The principal recipient of the proposed dissertation will be Dublin Business School. As the research is mainly intended to perform an investigation to understand the impact of communication strategies in delivering IT projects in a quality and timely manner in the IT industry, it is anticipated that many of the respondents interviewed will be interested in the outcome of the research. Hence, a copy of the research results will be made available to the respondents following assessment of the thesis by the examinations board.

#### 4.6 Research dispositions

The first chapter deals about the introduction of the research, historical background of the topic, introducing the research questions, defining purposes of the study and pointing the

scope (delimitation) of the study, This chapter also focuses on defining the five key research objectives for this research; namely **Academic theories on Communication strategies, Traditional Communication Strategies & Tools, Features of future communication technologies, Challenges in implementing new technologies, Feasibility study on implementing new technologies in IT Companies** The second chapters of this paper deals with the different literatures that can further explain the process of communication and its impacts in project management, this section also highlights two major academic theory (**Diffusion Theory & Communication accommodation theory**), Moreover, it summarizes the main theories at the end of the chapter. The third chapter of the study deals about the methodology of the research and how to increase knowledge in the aspect. The fourth chapter presents the analysis of the results respondents in corresponds with the theories discussed in the second chapter of the paper in order to answer the research questions. The last chapter present the main findings and conclusion of the paper. It also considered if the research questions, purpose is answered clearly.

Chapter 1	Introduction, Background of some literatures, research objectives, research question, purpose, & Disposition of chapters
Chapter 2	Literature Review
Chapter 3	Research Methodology
Chapter 4	Data Analysis & Results
Chapter 5	Conclusions & Recommendations.

*Figure 1 Research Dispositions*

## 5 Section 2: Literature Review

### 5.1 Introduction

In this chapter different literature that further explains about the selected research area has been reviewed. The literatures are drawn from general (project management) to specific elements (formal and informal communication) in order to make clear the area of study to

readers, the literatures will be written in a compatible way with the introduction part and the up-coming chapter of the research.

The literature review is the most critical discussion in the research, it is a process of identifying the awareness of differing arguments, theories and framework. When it comes to communication strategies, we have many academic journals, articles and books associated with this topic, however the core importance of literature review is narrowing down the selected literature to the key focus areas.

The literature review in this research is divided under eight main headings, namely **Academic theories on Communication strategies, Traditional Communication Strategies & Tools, Features of future communication technologies, Challenges in implementing new technologies, Feasibility study on implementing new technologies in IT Companies, Project management methodologies, Communication Plan and Stakeholder management**, the basis for selection of these categories is to link the literature review to the research questions.

## 5.2 Academic Theories on Communication Strategies

Projects are essential mechanisms for introducing change. Project management needs an all-inclusive theoretical framework to assess the factors that could influence the progress and performance of the project. Project progress is heavily dependent on project manager and project team leaders being able to communicate in a timely and effective manner. It is important to have an effective communication strategy in project management because we can prepare and set the right goals with all the project stakeholders (internal and external) only through effective communication strategies.

Communication decides and influences the relationship between the project manager and project members and how the members work to achieve the set project goals and objectives. When transparency and openness is ignored in project management, misunderstanding may occur among the project team members, a factor that may lead to project failure. Communication also improves contribution and sharing of ideas from all the project members. However, communication in project management ought to be conducted in all directions. This is the only way that the members will feel accountable of their roles and duties for the accomplishment of project goals and objectives.

This research offers a literature review and theoretical background on the importance of interaction in project management as one of the most crucial aspects of project management. Communication concepts are explored in relation to the values and methods of project management. Two principles i.e. in categorizing and selecting the right interaction methods and technologies for use in effective IT projects. Concept of diffusion and the concept of contact accommodation.

### 5.1.1. Diffusion Theory

The Diffusion theory of communication explains how new ideas and thought process spread through cultures. A path of communication is established to pass ideas and information to

the project team members and internal and external stakeholders. The spread of the thought is persuaded by the nature of the idea that needs to be spread, the available communication channels, the social system and time of communication [Westland, 2007]. The project manager should have the diffusion theory in mind during the project planning and execution of ideas in the discussions with project team members. Some team members can be confused by minor variations in the plan while other team members will not be affected [Campbell, 2009]. If the project manager is aware of Diffusion theory of communication, he has the flexibility of adjusting the plans to suit the requests of all project group members [Lewis, 2007]

### 5.1.2. Communication Accommodation theory

Good communication in project management depends heavily on the collaborating groups' ability to understand communication language and meaning. The principle of communication accommodation explains that; as task teams interact, they fine-tune their vocal patterns and expression to fit the message recipient requirements [ Mooz, Forsberg, & Cotterman, 2003].

To summarize, it's important for project managers to learn how to accommodate by adopting a communication methodology that would suits them and one that would best pass the message. For example, communication among project managers of different projects would be different from communication between the project manager and the project members. The latter is also unlike from the communication adopted with clients, stakeholders, and investors interested with the project [Carroll, 2012].

## 5.3 Traditional communication Strategies & Tools

Current communication tools are well-established techniques used for a long time in an organization (Taylor & Perry, 2005). That makes a communication tool traditional, however, is a subjective estimation and shift as new communication methods in the organization become well known. Traditional communication tools differ from trends resulting from a short-term peak in demand (Chopra & Meindl, 2016) and from new communication tools. It is possible to base conventional communication tools on both physical presence and IT. Current IT-based methods promote interaction one-way or top-down (Zyl, 2009). Types of common communication tools include mobile, Skype, E-mails & Meetings.

Meetings are a widely used method to address project-related issues (Stefik et al., 1987) and can occur face-to-face, remotely through IT tools like Skype or a combination of both. Meetings bring people together to accomplish one or more goals (Kay, 1995). Meeting demand also stems from the need for ideas to be produced, information shared, and action taken (Kay 1995). Good meetings are held when the meeting goal is achieved, which is likely when good meeting criteria are met. Firstly, participants need to be prepared and updated for the meeting (Pearson et al., 2006) to preserve focus towards the meeting objective. Secondly, the issues discussed during the meeting must be important and contribute to achieving the goal of the meeting (Stefik et al., 1987). Third and final, to explain the results of the conference, a follow-up with lessons learned and actions taken must be summarized (Kay, 1995). If appropriate, future actions on project-related issues will also be included in

the follow-up to ensure that the aim of the project is achieved. In addition to the requirements for productive meetings, during the meeting, the project team may also use resources to promote the meeting's fulfilment (Kay, 1995; Stefik et al., 1987). Meetings can often be used to solve problems related to the project; Nonetheless, (Kay 1995) challenges the capacity of meetings to address project-related issues as members are prevented from working on projects at the same time. Furthermore, (Kay 1995) argues that some information gained from the meeting will always be lost as it is impossible to document everything communicated. Instead, IT-tools should support meetings where tasks can be run simultaneously, and information can be saved more frequently.

#### 5.4 Features of future communication technologies

This section summarizes key emerging future technologies that the literature identifies as potential opportunities for enhancing creativity within virtual teams and increase in the productivity of resources in the future. These technologies are:

- Slack
- Gmelius
- Ryver
- Fleep
- Slenke
- Teamwork Chat

**Slack** has ousted many of its rivals to become probably the most well-known and widely used communication tools. This tool is built around messaging in channels and threads. It's flexible and fairly intuitive to use but with little way to organize the conversation within a thread, it can be easy to miss important parts of a conversation within the message stream.

Slack is one the most popular communication tools for business. Among other features, it offers an advanced search engine to quickly find and access previously shared information.

##### Features of Slack:

- Direct Messaging
- Group Messaging
- Audio Conferencing
- Video Conferencing
- 1500+ Project Management Tools Integrations

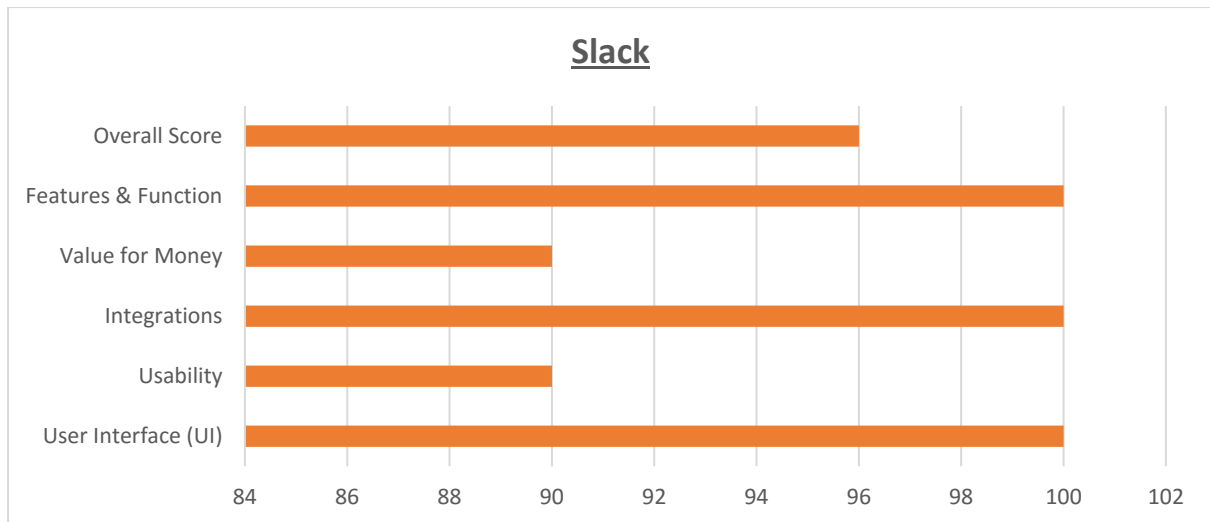


Figure 2 Slack Statistics

**Gmelius** allows teams to communicate on clients and projects without leaving their inbox. Gmelius lives in Gmail, which means there is a near-zero learning curve. While most teams are using up to four tools to communicate and collaborate, Gmelius allows you to get rid of them. Its interface is designed to be user-friendly and intuitively feels like you are simply using a more powerful version of Gmail.

Gmelius sits right inside your Gmail inbox to provide a range of communication, task management, and workflow automation features.

Gmelius empowers the Gmail inbox with a range of collaboration tools and allows users to combine them together to automate workflows. Teams can manage group emails like sales@ and support@ directly from Gmail in the Shared Inbox. Email and ticket assignment make delegation and accountability clear. Sequences automate workflows with “If this, then that” directions. Kanban boards integrated into Gmail inbox give teams visibility on the status of each project. The software’s shareable tools such as email templates, notes, sequences and boards allow teams to collaborate in real-time.

Gmelius syncs in real-time across all team members and all their devices, and it integrates with Slack via 2-way, real-time syncing. More than the standard integration, it also allows your team to sync shared label and shared inboxes.

Gmelius offers a support system for its users, including live support via online chat, a dedicated team, and 24/7 access to their knowledge base, which includes tutorials, guides, videos, and FAQs.

#### Features of Gmelius:

- Direct Messaging
- Group Messaging
- Automate Workflows
- Email templates
- Shared inboxes

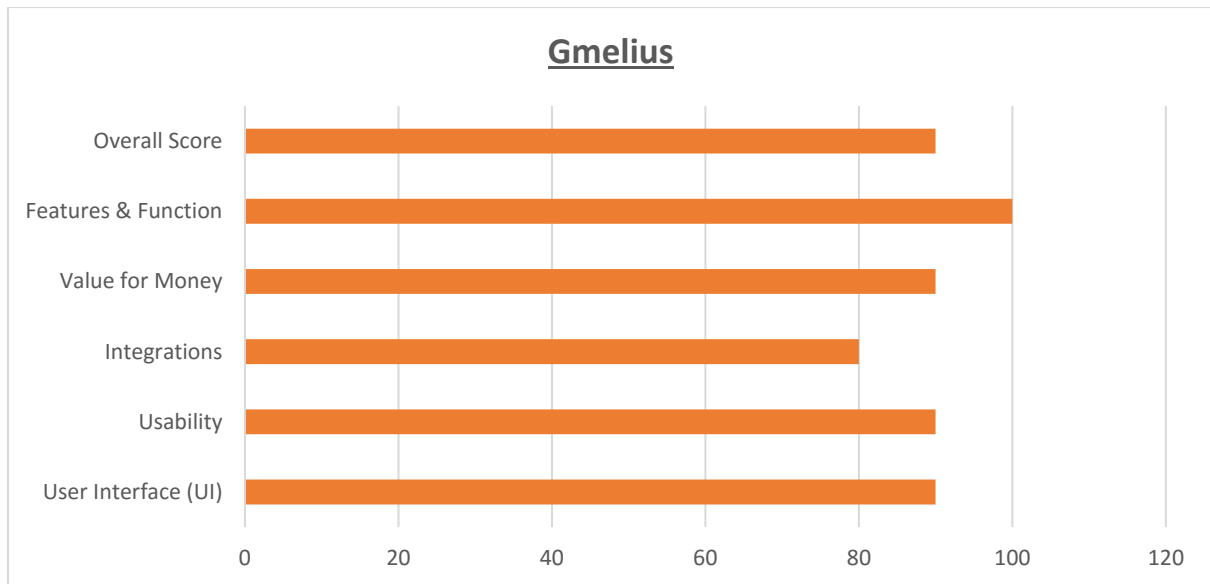


Figure 3 Gmelius Statistics

**Ryver** is a robust communication tool to centralize messages, tasks, and voice and video conferencing with workflow automation features to streamline the process. It is a communication software that openly presents itself as Slack’s biggest competitor. Ryver is more of a hybrid tool, supplying both communication and task management features. On top of its communication arsenal, Ryver offers task management features like task boards, file sharing, task checklists, etc.

Ryver helps you keep your conversations organized in different channels, with viewing options like chat, posts, files, people, and more.

Ryver supports video and audio conferencing, group, private and guest messaging systems, and screen-to-screen sharing. Ryver’s streamlined threading of communication data is top-notch, but the push notification system might require a third-party app to work flawlessly, depending on how you’ll be using it.

Ryver integrates with a whole bunch of popular apps, including Jira, Trello, Google Docs, Salesforce, GitHub, Asana, Dropbox, Google Drive and OneDrive.

**Features of Ryver:**

- Audio Conferencing
- Video Conferencing
- Direct Messaging
- Group Messaging
- Screen to Screen Sharing
- Integrated with Apps like JIRA, Trello, Google Docs, Salesforce, OneDrive

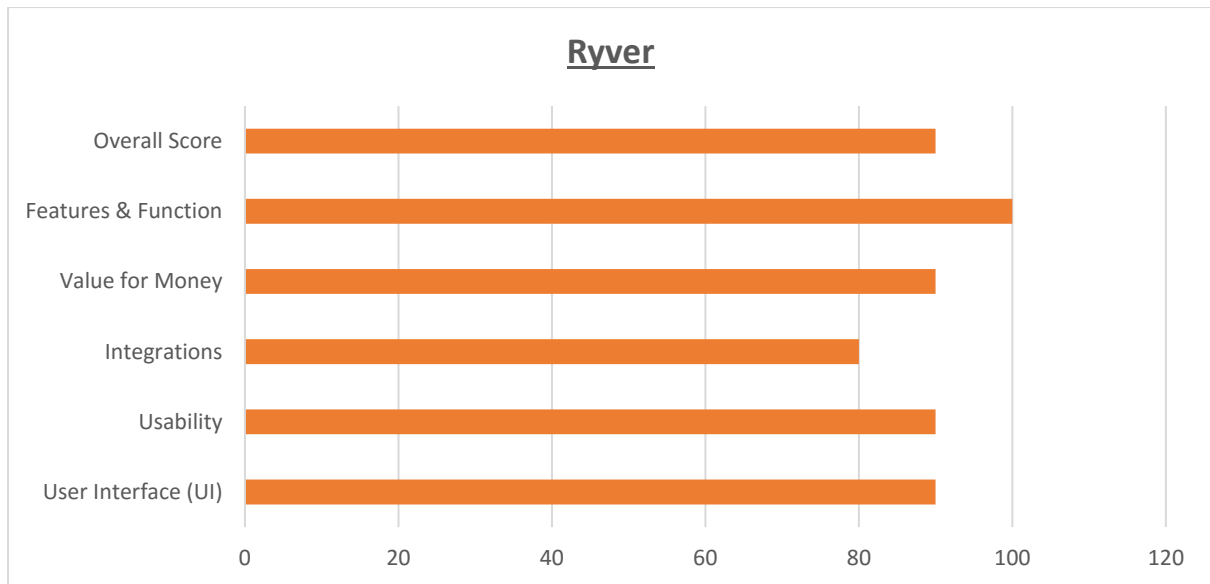


Figure 4 Ryver Statistics

**Fleep** is a network (just like Skype or FB Messenger) that allows you to communicate with other Fleep users, or with any team on Fleep. In addition to its communication feature set, Fleep offers a native task management feature, which is a rare find in most communication tools. Integration is Fleep’s answer to the question of busy digital workplace communication.

Fleep offers audio and video conferencing through a built-in integration with appear.in, as well as individual chat and group chat. It offers options to make discussion boards, along with some corresponding document management and file sharing tools. It also offers a good system of push notifications, built-in search, and a screen sharing module.

Fleep integrates with other project management tools like JIRA, Confluence, Trello, Slack, GitLab and GitHub. It can integrate with all the mainstream social networks, as well as work apps like Dropbox and the Google Suite. You can use the Fleep API to sync with other apps.

**Features of Fleep:**

- Audio Conferencing
- Video Conferencing
- Direct Messaging
- Group Messaging
- Built in Search
- Integration with Social Networks

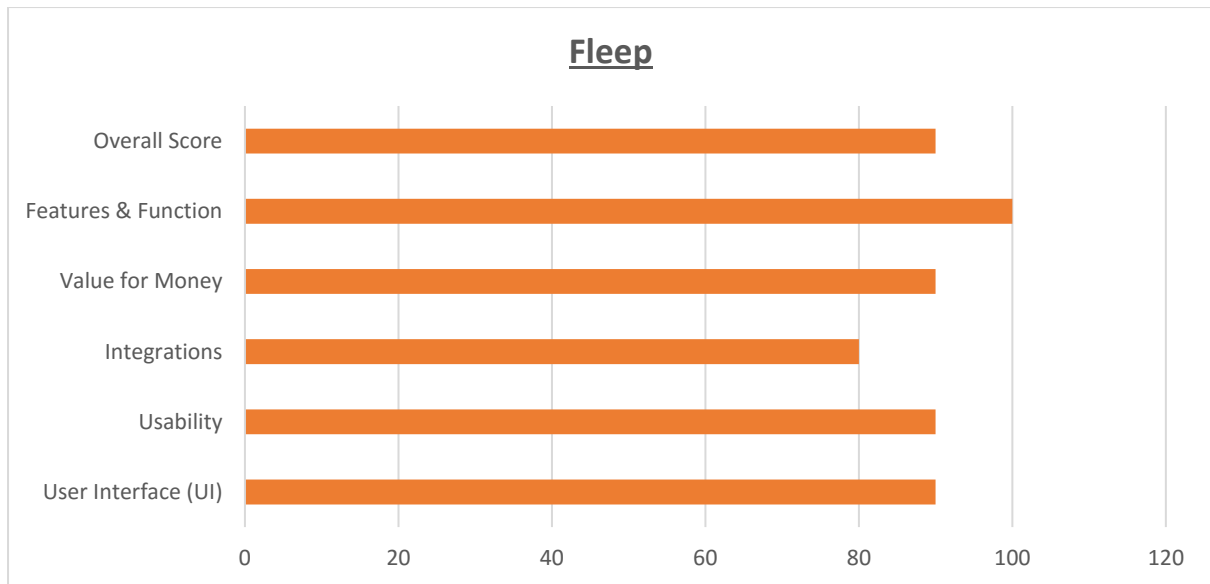


Figure 5 Fleep Statistics

**Slenke** combines of task management, time management, and communication. This tool is fairly new to the game (the company was founded in 2012), and offers a modern, clean, and visually beautiful interface.

Rare among communication apps, Slenke does not offer a built-in video, audio conferencing, or screen sharing. It's less of a stand-alone communications tool and more of a lightweight—but comprehensive—project management tool. In terms of communication, you can create messaging boards, and use both private and team chat.

The notifications work as long as you are in the browser, and if you are using Windows OS, you can set them to be native to your PC.

#### Features of Slenke:

- Messaging Boards
- Direct Messaging
- Group Messaging

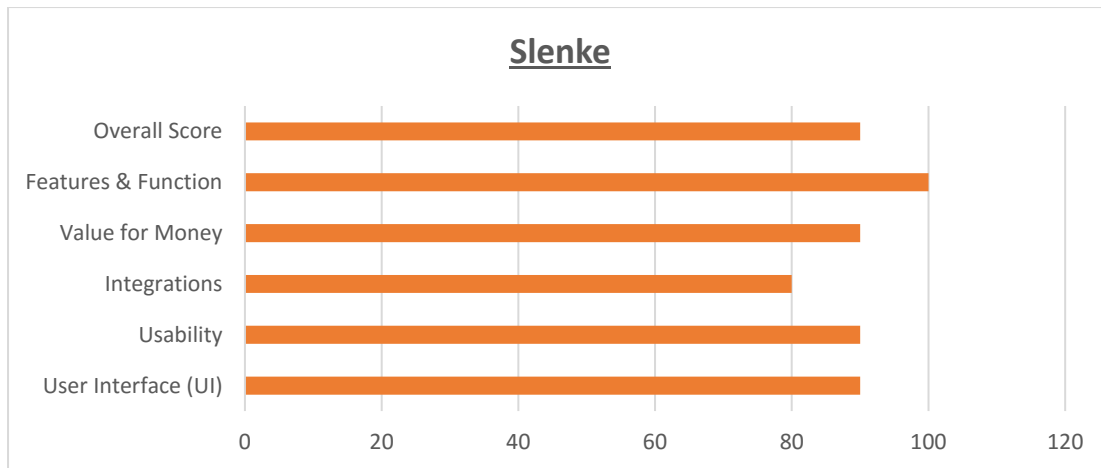


Figure 6 Slenke Statistics

**Teamwork Chat** is designed as part of the Teamwork ecosystem. However, it has a lot to offer as a stand-alone communication app as well. Teamwork chat proves to be the best for teams that share a lot of external links and media, like videos and news articles, making itself very useful for marketing, creative, and advertising teams.

Teamwork Chat offers video and audio-conferencing, screen sharing, group and private messaging, and a visually beautiful interface with streamlined communication threading. A useful feature of this tool is that you can answer emails directly from within the app. Also helpful is the ability to tag team members on urgent messages.

Being native to the Teamwork ecosystem, this communication tool integrates with the same third-party tools that Teamwork integrates with: Slack, Asana, Salesforce, Trello, Gravity Forms, Google Docs and Calendar, Gmail, Drive and Dropbox.

**Features of Teamwork Chat:**

- Audio Conferencing
- Video Conferencing
- Direct Messaging
- Group Messaging
- Screen to Screen Sharing
- Integrates with Slack, Asana, Salesforce, Google Docs & Dropbox

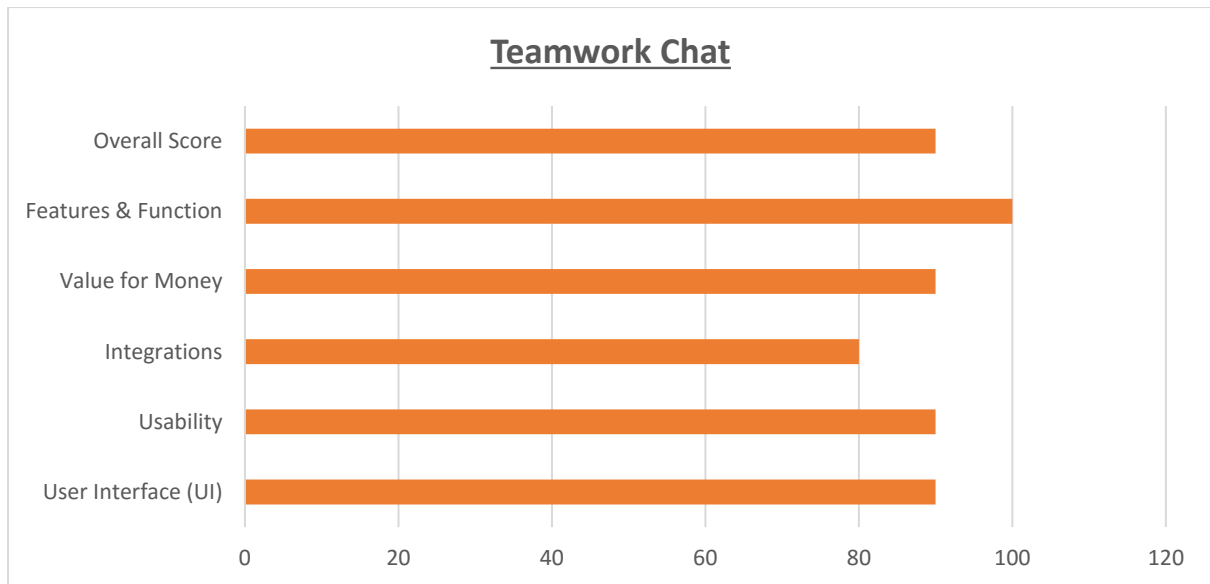


Figure 7 Teamwork Chat Statistics

## 5.5 Challenges in implementing new technologies

There is an endless amount of technology to be used around the world. Technologies are rapidly developing, and it is a long process to pick the one for the next spearhead tool of the company. It has to be recognized from the mass or created by someone to get new technology out of the blue. First of all, the device must be able to do what is needed for current and future needs if an existing technology is to be introduced.

According to **Kautto (2012)**, the project manager has to be able to capture all the requirements effectively in the new tool in the construction projects and in the detailed design phase. There is currently not a lot of software that can do this in a cost-effective way. It narrows the reach of available software, but a lot of research and testing needs to be carried out by project teams to find out the required features.

While identifying potential technology capable of delivering a task, the modifiability of the software must be evaluated. Somehow, if all companies have the same device, it must be improved to offer more market benefit than others. Modifiability is also important, so it is possible to make necessary changes and revisions to support companies' own processes.

Support for technology also plays a major role while it is dependent on a reseller or distributor (**Ballardini 2012**). It is necessary to have a channel of writing contact to reach out if there are any post-implementation issues, such as hyper care support or CR process. Owners in the software industry tend to change after markets have been fairly punctuated by a specific software. The big ones usually buy their competitors out of the markets in these situations. This can lead to unexpected issues with an applied software's assistance, records management and maintenance.

Finally, license forms have different types of technology use. Stand-alone licensing is the basic approach where the license is locked into the machine of the employee. For the time being, floating licenses allow users to receive licenses from a license database while using the software. This makes it possible for many users to use the same license, but not at the same time. Volume licensing is exactly the same as stand-alone licensing, but it allows installations more flexibility. On-demand or lease licensing, such as template Software as a Service (SaaS), is one of the new consumer attraction strategies for vendors. Limitations of the above choices may have a negative impact on the implementation of a new software

## 5.6 Feasibility study on implementing new technologies

The purpose of feasibility studies is to answer the question: Which alternative is the most feasible for solving a given problem?

This is in principle a very simple question, but before the calculations can be made one must define a number of complex issues, such as:

- Most feasible compared to which alternatives?
- Most feasible to whom?
- Most feasible in meeting which objectives?
- Most feasible within which time horizon?
- Most feasible including which consequences?

It should be stressed that it is important to put feasibility studies in a historical context. It suggests, for example, that feasibility studies must include detailed analyses of the effects and possibilities of such changes in times of massive technological and organizational change. Investments in cleaner technology and other kinds of environmental changes in the pre-sent situation typically require drastic technological change and innovation. Therefore, in such situations, all feasibility studies must include a summary of the technical context's character.

The main parameters to be taken into account when carrying out feasibility studies are:

- In order to find the best solutions relatively independent of existing communication platforms, perform analyses with a very long-time horizon.
- analyse current communication systems connections. This is especially important where the existing system is over capacitated. For example, if we can achieve both audio and video conferencing through the existing communication platform, the new technology will definitely be able to complete that.

The process for conducting feasibility studies can be divided into the following key steps: -

- **Phase 1:** Definition of What to Study, Whom, and Why to Study (the www-analysis).
- **Phase 2:** Detailed feasibility study product development (Diamond -E analysis).

- **Phase 3:** Real estimation of a concrete feasibility study involving a significant part of the feasibility study work.

In Project management, new communication technologies have had to be developed and invested in while competing with and being compared to the existing technology platforms. It also requires project team to dig deeply into the total identification of new systems to connect to the broader objectives in the project and also look ahead into a sustainable future, and to challenge the idea of just maintaining the old technological systems instead of investing in newer and effective ones. Therefore, feasibility studies cannot simply be cost-benefit calculations that assume that the present platforms will lead to the best of all worlds. In short, feasibility studies aim to serve as an effective social learning tool to overcome some of the existing barriers and pave the way for cleaner technological innovation and a sustainable future.

## 5.7 Project management methodologies

Communication plays an important role in any project's success. Communication skills are the main factor for project progress in any successful project where project management has proven to be achieved (**Müller & Turner, 2010, p. 24**). Communication in projects, especially for large projects, is very important for success. The bigger and more complicated the more communication is important to the end result (**Olsson & Johansson, 2011, p. 31**). Project management processes are defined by progress monitoring, improvements required, predictions, organizational processes and updates (**Olsson & Johansson, 2011, p. 30**). One basic interaction mechanism is to exchange information in such a way that it socializes workers through socialization, collaboration and mutual understanding in the projects, as contact is "the nervous system of any organized group and the glue that keeps organization together" (**Olsson & Johansson, 2011, p. 31**).

Communication objectives are established by shareholders' interest. The willingness of project managers to interact during the execution of the project is crucial to the success of the project. Communicating with stakeholders is one of the important tasks for project managers (**Tonnquist, 2008, p. 161**). Effective communication may not always be effective persuasion (**Tonnquist, 2008, p. 161**) in order to share the right information, the fundamentals of communication are very important. Communication is still important in the new dynamic environment of project management (**Henderson, 2008, p. 48**). The research study in this field by (**Locovou et al., 2009, p. 785**) shows that quality interaction comes from high project officials who can provide reliable, detailed, accurate and timely data for project feedback. The following diagram of Shannon weaver communication model shows how communication flows from sender to receiver in the context of project communication either internally or externally

## 5.8 Communication Plan

Establishing communication infrastructure is very important in any projects. Effective communication plan present specific type of information (**Klein, 1996, p. 32**). The aim of communication plan is to create the right information in the right time and place in an

appropriate way for the audience (Hartley, 1997, p. 345) highlights the importance of planning for reducing risks and mistakes. The communication plans also show the flow of information intended to perform by the project manager, the plan usually contains information that needs to be collected and information that needs to be distributed (Tonquqvist, 2008, p. 166). The following table shows how the communication plan of projects should be applied in the project organization.

Who? Receiver	Why to communicate?	What information?	How?	When?	Who? Responsible
Members of the project organization	Establish project with important stakeholders	Pre-study	Project meetings		Project manager
		Requirements Project plan			
Clients	Deliver decision documentation	Budget and calculation	Steering committee	Pre-planned by project-initiation	Sponsor Client
Potential users	Distribute financial information to financial administrator	Resource requirement plan	Meeting Reports		
Reference groups		Test results	Online-project intranet	When needed	Press-secretary
Contractors Partners	Show what the project has accomplished	Financial outcome	Demonstration and presentation	Continuity	Project team member
The line organization	Exchange lessons within project or stakeholders	Resource utilization	Project archive		
		Change	Revisions Final report		
		Prototype			
		Project reviews			
		Experiences			Quality-assurance managers

Figure 8 Communication plan of projects (Tonquqvist, 2008, p. 167)

It has been discussed by (Tonquqvist, 2008, p. 168) that communication means can be different from project to projects. But, most of project communication can be implemented by meetings, reports, telephone, seminars, lectures and project portals where the project employees share documents together by private username and password.

## 5.9. Stakeholder Management

In the early stages of the project, the influence of investors is often felt most strongly. At this point, the plan is adaptable and can be modified, and stakeholders are usually aware of this. Once it starts moving, it takes on its own momentum and energy, and the cost of stopping it or changing its direction becomes high. The influence of investors sometimes decreases when the plan starts but will increase again as the handover approaches. Project managers will continue to manage expectations of stakeholders and ensure that the completed scope and purpose of the project satisfies stakeholders' desires as well as possible and is received positively.

One of a project manager's main duties is to connect with stakeholders, it's the direction that helps project managers develop a healthy stakeholder relationship. The main goal of engaging with stakeholders is to build interaction with the project, minimize resistance, communicate key messages, communicate in two directions, and create awareness of the outcomes of the project. Based on the literature provided by [Scholes & Clutterbuck, 1998, p. 230] quality monitoring plays a major role in engaging with stakeholders, this can be achieved by daily / weekly / monthly reports including both face-to-face and written interaction. There are only limited studies in communication aspects of stakeholders in managing projects, nevertheless [Cromity, 2011, p. 34] highlight that the ways of communicating with stakeholders are interconnected with similar channels of internal and external communication

## 5.10. Literature Conclusion

Communication is an important project management element. Consistent contact between project managers, team members and stakeholders mean that the latest project data is available to the people involved in the project. This will also ensure that every member of the team is heard and make them feel included in the decision-making process. In project management, concluding all the ideas and literature mentioned in this chapter plays a vital role. Communication strengthens partnerships and outlines the goals of the plan. Therefore, the project manager should ensure that the decisions taken as part of this project is satisfactory and he should ensure he is considered the inputs of all project group members. It is evident that project manager spends most of his time communicating with the project group and stakeholders, therefore this stresses the importance of good communication skills in project management.

## 5.11. Research Hypothesis

The success of project management is heavily relied on the ability of project manager to communicate with the project group members and other involved internal and external stakeholders. This research has deduced that the project manager should be able to apply the theories of communication in determining the language suitable for different communication circumstances. These ideas are built over some hypothesis:

### **Hypothesis 1: Is communication a critical factor to project failure?**

This hypothesis is tested by considering majority opinions and ignoring minority opinions in project management. This can also be tested by gathering feedback of project team

members whose ideas seem to be ignored by project managers during the course of the projects.

### **Hypothesis 2: Is current communication strategies effective?**

This hypothesis is tested through a comparative analysis of communication strategies developed by project managers in larger and complex IT projects. Perception and thought process of experienced project managers and Business Analysts can be taken into consideration to test this hypothesis.

### **Hypothesis 3: By Bringing in latest tools and technologies pertaining to communication strategies, have a positive impact on project success rate?**

This hypothesis is tested through a comparative analysis of challenges faced by project team members due to current technologies and consideration of the perception that research participants have when communication strategies are developed through latest tools and technologies.

## **6 Section 3: Research Methodology**

### **6.1. Introduction**

Research Methodology is defined as the way the knowledge is gained and theories are generated and tested, and it also defines the relationship between theoretical perspectives and research problem [Saunders et al., 2009, p. 98]. The significant importance of having a research methodology is to help the researcher in answering the research question through collecting important information about the research topic. There are many ways which help the researcher to conduct the research.

The institutional body of project management guide (PMBOK, 2013), published by Project Management Institute (PMI), USA, is a compilation of processes and expertise areas generally accepted as best practice within the discipline of project management. PMBOK recognizes nine project areas (scope, cost, time, quality, risk, procurement, integration, resource and communication) that can be treated as critical success factors (CSF) in assessing project performance. Nonetheless, this research focuses primarily on the triple constraints in the assessment of agile testing projects, namely time, cost and range, with a key focus mainly on time and scope. This study symbolizes the researcher's chosen theory, methodology, method, choice of participants, and research ethics and data collection procedures and explains them in the scope of the research questions and intent of this thesis. The overall success of research is heavily relied on the methodology that is adopted in the research. However, in this specific research, the researcher would be applying **Qualitative methodology**

### **6.2. Research Design**

**Qualitative methodology** is designed in a manner that which helps in revealing the behaviour and perception of the target audience with reference to the research questions. There are different types of qualitative research methods, such as in-depth interviews, focus group

surveys, ethnographic research and case study analysis. However, the results obtained through qualitative methodology is very descriptive and the opinions can be drawn easily from the data samples that is obtained.

The reason behind choosing this method is, it provides in-depth understanding of the ways people act on their day to day situations. As this topic revolves around social – interactions, processes and project management activities. The requirement here is getting the expert opinion on how communication strategies are built today in leading IT organizations and this methodology would also help researcher to know how effective is the current communication technologies that are adopted in IT Projects are and it also gives a window for a discussion on how IT project managers perceive the idea of implementing the new tools and technologies that are available in the market for developing communication strategies.

### 6.3. Research Philosophy

Research philosophy deals with the source, nature and development of knowledge [Bajpai, 2011]. In layman terms, a research philosophy is belief about the means in which data about a phenomenon should be gathered, analysed and used. The researcher would collect primary and secondary data sets and engage in data analysis process to answer the research question and this answer would marks the creation of new knowledge area.

Knowledge is developed and theories are built through developing ideas inducted from the observed and interpreted social constructions. For the purposes of this study it has been identified that the research goal is best suited within the framework of the Positivism & Interpretivism approach. According to the research, the research philosophy is interpretive under epistemology since the aim of the research is to investigate how communication technologies play a vital role in delivering IT projects in quality and timely manner and how future communication technologies involve in the role of creating successful Communication strategies.

As this research will have collected data from a survey using questionnaire, positivist approach has also been selected by the researcher. A positivist also uses the deductive approach and the data collection of the questionnaire needs a deductive approach in order to best analyse the data. The researcher also selected positivism on these grounds. Research based on this approach will lead to legal conclusions such as generalizations known as "a pattern or regularity that repeats over different circumstances and can be represented simply by numerical, graphic or symbolic methods. A pattern that persists, but in all situations need not be universal "(Hair, 2003).

In essence, addressing research philosophy in this research involves being aware and formulating researcher's beliefs and assumptions. Normally research philosophy has many branches related to wide range of disciplines. Based on the research type, the researcher would follow two research philosophies such as Positivism and Interpretivism.

Positivism - As a philosophy, positivism remains to the view that only “factual” knowledge gotten through observation (the senses), incorporating measurement, is reliable. In positivism studies, researcher is limited to data collection and interpretation in an unbiased way. In these types of studies research findings are usually observable and quantifiable [Collins, H. 2010].

Interpretivism - Interpretivism, also known as interpretivist, involves researchers to construe fundamentals of the study, thus interpretivism integrates human importance into a study. Accordingly, “interpretive researchers assume that access to reality (given or socially constructed) is only through social constructions such as language, consciousness, shared meanings, and instruments [Myers, M.D. 2008]

Based on the above-mentioned philosophies, below are the popular data collection methodologies associated to these research philosophies.

- **Positivism** – Highly structured data sets and Large samples.
- **Interpretivism** – Small samples in-depth and investigations, qualitative.

#### 6.4. Research Approach

**Research approaches** are plans and analysis techniques that vary from wide-ranging hypotheses to detailed data collection, evaluation and interpretation methods. This plan involves multiple decisions, and they do not need to be made in the order in which they make sense to me and the order of their introduction here. The ultimate decision includes what approach to research a subject should be used. Informing this decision should be the theoretical concepts brought to the study by the researcher; investigation techniques (known as research designs); and specific data collection, evaluation, and interpretation research methods.

The choice of a research methodology is also focused on the essence of the research topic to be discussed, the personal perspectives of the authors, and the study audiences. Therefore, research techniques, research designs, and research methods are three main words in this book that reflect a research viewpoint which introduces knowledge successively from large research constructions to specific process procedures.

Saunders describes Inductive approach has an approach where researcher collect data from different sources and a theory is developed as a result of the data analysis [Saunders et al., 2009, p. 129]. The inductive approach is a bottom-top approach where the researcher begins which collecting data from the research recipients and then the data is analysed, collected and used as a source for establishing theory. The researcher would follow **qualitative** approach for this research.

**“Qualitative Approach** - Qualitative research is an approach that allows individuals or groups to explore and understand the meaning of a social or human problem. The research process involves evolving questions and procedures, information usually collected in the setting of

the participant, inductively constructing data analysis from specifics to general themes, and interpreting the significance of the data by the researcher. There is a dynamic framework in the final written report. Many involved in this type of inquiry endorse a way to look at research that respects an inductive approach, an emphasis on individual significance, and the importance of making a situation complex.”

A research which is based on inductive approach will most likely choose a qualitative research with a small sample of subjects. In this specific research, the researcher would use inductive approach, as the research will analyse the current communication strategies that are adopted in IT projects and how communication plays a vital role in success of IT projects. Inductive approach will be adopted by collecting the data samples from different people involved in IT projects such as IT Project Managers, IT Business Analysts and IT Consultants to identify the pros and cons of current communication strategies and ways to improve it in future.

### 6.5. Research Strategy

A Research Strategy is a step-by-step plan of action that gives direction to researcher thoughts and efforts, enabling the researcher to conduct research systematically and on schedule to produce quality results and detailed reporting. This enables researcher to stay focused, reduce frustration, enhance quality and most importantly, save time and resources. The Research Strategy is the nuts and bolts of your research, describing the rationale for your research and the experiments researcher will do to accomplish the desired goals.

Resource strategy introduces the main parts of the research, such as the research questions, research design, research perspective and the research methods. Research strategy helps the researcher in answering the research question, which indirectly helps the researcher in meeting the overall objective of the research.

There are four main types of research strategies:

1. Case Study
2. Quantitative Survey
3. Qualitative interviews
4. Action research or action-oriented research.

The researcher would use “**Case study**” as the research strategy in this specific research, since this research is based on qualitative methodology, strategies such as case study through interviews are used. As per the research, this topic revolves around the communication strategies that are used in IT projects, the researcher would collect the data through in-person interviews with IT project managers and IT Business analysts who has immense knowledge in this area. The data collected from these interviews would be further analysed and conclusions would be drawn.

### 6.6. Research Choice

(Saunders et al 2009) states various kinds of research methods; they are essentially divided into two main categories with some subcategories. The research methods are divided to mono and multi method. According to (Tashakkori & Teddlie 2003) mono method means research done with only one method either qualitative or quantitative. Saunders et al (2009) multi method is divided into two categories; multi-method and mixed method. Multi-method divided into multi method (Qualitative data) and Multi method (Quantitative data). On the other hand, mixed method divided into mixed method research mixed model research. The researcher has followed the mono method research (qualitative method) in this research.

As interview will be taken from IT project managers, Business Analysts & Solution Architect, who work in Information technology projects to know how they use communication technologies and successful communication strategies with their project teams. Qualitative data will be collected through qualitative data collection techniques such as interviews and the data will be analysed through qualitative data analysis procedures.

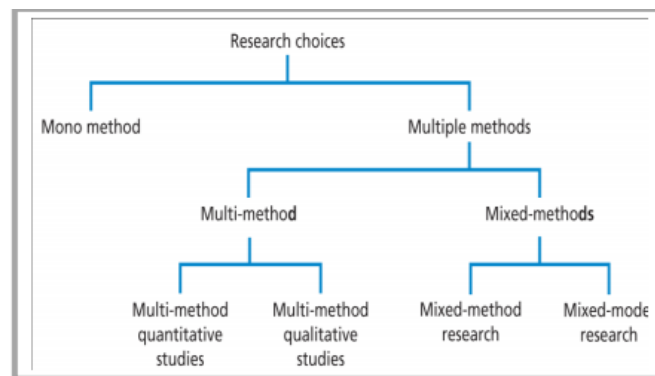


Figure 9 Research choice Source: (Saunders et al., 2009, p. 152)

After collecting the qualitative data, the researcher will analyse them by their data types to recommend communication strategies for projects in IT sector on how to improve the communication strategies by using latest communication strategies and technologies.

## 6.7. Time Horizon

According to Saunders et al (2009), when conducting a study, there are two types of time horizons that can be considered; cross-sectional and longitudinal. Most of the time horizon for a research depends on the research questions. The timeline for a study and taking a snapshot of a particular time and performing the research is called cross-sectional (Robins, 2002). If a researcher takes over a long-term inquiry by logging in and keeping a diary of events is considered retrospective and it is not time-bound. Because of its cost and time, quantitative study is very rarely used in business and management. The researcher has used Cross Sectional time horizon in this research since the research is time bound and the research had a strict deadline and timeframe to complete the research.

## 6.8. Research Ethics

The ethical issues that the researcher might come across are during the interview are that the interviewee might answer to the questions in a biased manner. For example, the Project manager might have worked predominantly on the management side of IT projects and may not be in favour of communication technologies and acquires less knowledge how deeply communication technology is utilised in IT sector. Also, the particular project manager might be in a rush to complete the interview due to some personal circumstances. In order to make sure these problems are not faced the project manager would be selected in such a way he has enough experience in handling IT projects

In IT sector, the participant would be intimated well in advance about the nature of the interview. The particular sample would be given a specific timing according to their convenience. The participants in the interview would be given full confidentiality and anonymity and this will also be told to the researches well in advance, the researcher will also make sure the NDA forms are signed as part of this interview process. Apart from these the participants will be given the full freedom to withdraw from the interview at any point in time, as putting constant pressure on the participant might result in getting unclear data or biased data or unreliable data.

As stated by (Bryman, 2007, p. 177) all potential precautions will be undertaken in order to ensure that participants are not affected by the research. The Ethical issues will be seen in this research according to Dublin Business School Ethical Approval. In order to promote honest and truthful and open responses and to maintain respondent confidentiality, the researcher has decided to give the interviewees the option to keep their answers anonymous and send the abstract of the final report. Participants of this research will be assured of the confidentiality of the information given prior to and after the interview process. Assurance of confidentiality allows for sincere responses from the participants. To comply with all the mandatory ethical rules, the researcher codified the records of each participant's interviews to make them completely anonymous. Each participant will be assigned a number and no personal information was collected other than age, gender, education level, the amount of years the individual has been employed by the organization, and the amount of years the respondent has led projects in IT sector

## 6.9. Data Collection Approach

"A research strategy involves empirical research into a specific contemporary phenomenon using various sources of evidence in its real-life context." Main as well as secondary data were used. The primary data was collected via skype, telephone-based, and LinkedIn over a span of one month in a combination of structured and semi-structured interviews.

The respective project managers, Business Analysts and Data Architects working in IT sector from various locations were selected by the researcher, who described them as the best sample of opposing work and national cultures in terms of the project aimed at exploring the communication strategy in IT projects.

It was possible to capture more details and discrepancies between the locations by interviewing workers from several places. The researcher found that interviews would help to gain a deeper understanding of the subject, and semi-structured informal interviews would also help to address the research question.

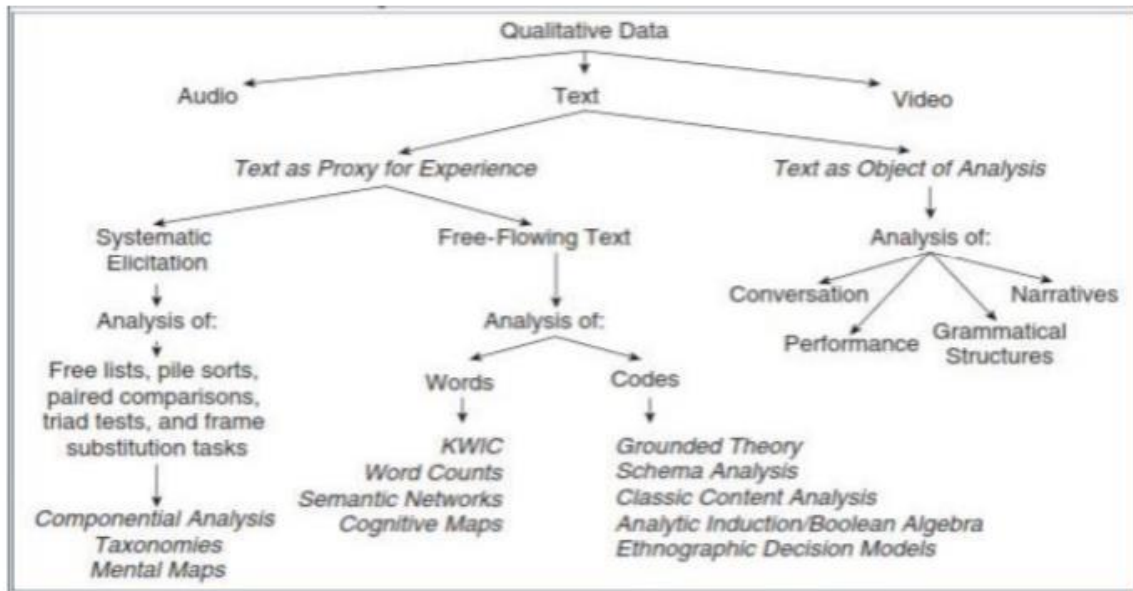


Figure 10 Qualitative Data Analysis

The interview, as a data collection tool, offers an opportunity to reflect the truth of the respondents rather than my expectations and beliefs, and is therefore, for example, more successful than observation. Semi-structured interviews were chosen because in a structured manner it provided an in-depth view of the subject. Semi-structured interview provides more flexibility for a researcher to discuss interesting points or topics that have possibly been overlooked rather than a structured interview with somewhat predetermined responses and no possibility to go into a more relevant topic. The semi-structured nature of the interview still calls for an interview guide that helps to make the interviews consistent, valid, replicable and comparable, enough to draw conclusion, compare and make a sample

There is a total of five interviews with project managers, Business Analyst and Data Architects with expertise in IT industry projects. Interviews will be registered in PC and recording software in the mobile through the Skype recorder app. According to **(Saunders 2009)** recording the interviews via recordings has tremendous benefits because they could be re-heard, and the tapes can be re-played if any problem occurs in the later stage.

## 6.10. Data Analysis Technique

**Craig&Douglas says (2005).** The two methods of data collection are qualitative and quantitative. The selection of appropriate testing techniques will lead to a number of questions. The researcher has chosen qualitative research methodology to improve the information needed for different dimensions of the issue, as well as information accessibility. Qualitative research will be used as the key technique as it allows the lack of quantitative research to provide the details and information. Qualitative analysis has the potential to provide the issues in a sense of real life that helps to create practical organizational solutions. Researcher explores and tries to provide the real organizational consequences and guidance for remotely working, how coordination is missing in IT projects and how IT Project team success is not spontaneous, as well as the different cultural context. From the interviews, the qualitative data will be analysed, and the interviews will be completely transformed into text form transcripts.

The data from each of the interviews would then be analysed and compiled and translated into a compressed or simplified form that would eliminate all the unnecessary information. Categorization and unitization from each of the data will be analysed and interviews taken from the project managers and software engineers will be compared consequently and conclusions will be drawn based on all of the interviews. Instead of seeking help from different available software packages, the researcher tends to evaluate qualitative data manually. The reason behind this is that the manual way of analysing the interview makes the researcher feel that the software would take off the creative aspect. The final footstep is to compare the findings of qualitative data and compare it with the secondary data.

### 6.11. Population and Sample

Sampling methods are important in any research work, where it is not possible to cover the entire population due to resource constraints or time constraints, according to **Bryman and bell (2007)**. The researcher would be able to draw conclusions in most situations based on a specific study. The sampled population must, however, be appropriate and representative of the entire population in order to do so.

Sampling is therefore considered necessary for this study to be very difficult to sample the entire population. **(Bryman, Bell and Teevan, 2009)**. In view of the qualitative research approach, the sampling methods selected for this analysis are snowball sampling and qualitative non-profitability surveys. Snowball sampling is a form of sampling that typically uses Probability methods to select the initial respondents. The researcher uses the initial respondents to establish relevant additional contacts in snowball sampling. **(Hair, November 2003)**. The research also focuses on an unlikely sample that provides fruitful information in order to gain theoretical insight into the research phenomena.

The selection of interview candidates was based solely on the seasoned experts who handled communication Strategy in multinational projects in the IT industry. The researcher targeted project managers Genpact, Business Analyst, VMware and Data Architect, Expedia for the interview. The researcher ensured that chosen project managers, Business Analyst and Data Architects had huge experience working in IT projects.

## 6.9. Limitations to Research Methodology

The primary limitations of the methodology relate to difficulties in getting a sufficient information about the usage of communication technology in IT industry. Furthermore, project managers and project team members of the IT Industry Federation take annual holidays from December 25, 2014 to 3 January 2015. This presents a significant challenge to ensure a satisfactory response rate from the interviews to analyse, transcript the recorded interviews and to draw generalizable conclusions from the data obtained. However, the researcher is confident that this obstacle can be overcome by issuing high number of interview questionnaires at an early stage.

## 6.10. Research Methodology Conclusion

To conclude, the researcher will be conducting a survey, sending questionnaires to a selected group of surveyors, Business analysts, solution architects and project managers. The number of questionnaires sent out will be 10 to 15. The reason for choosing a questionnaire was because the data could be collected across the different geographical distances. The questionnaire consisted of two sections with 7 questions. For the purpose of this paper, the focus is on Section A, which consists of questions regarding project management communication in general and Section B, consisting of a question regarding the impact of communication strategies and latest technologies on the success of the project management areas. The opinion of respondents will be collected, and conclusions will be drawn out of it. Participants can choose to answer 'None' which represents the 'not respond to the question'

# 7 Section 4: Data Collection, Discussion, Analysis, Sampling & Results

## 7.1. Data Sampling

The researcher would begin the data collection process by preparing a sample questionnaire which would contain key information about the research topic, which would help researcher in getting information about the current communication strategies that are used in IT projects, pros and cons of current communication plans and information of tools and technologies that are used in current IT projects, researcher is targeting 30 audiences with different business titles such as IT Project Managers, IT Change Management Consultants, IT Business Analysts to send this questionnaire who is based out of India, Unites States & Ireland. Post receiving the information, researcher would then identify 5 to 6 key recipients and perform in-person interviews, who is located in Ireland. Finally, the data which is collected from survey and in-person interviews would be analysed and conclusion would be drawn to help answer the research question.

## 7.2. Data Collection

There are numerous methods of data collection in qualitative methodology, this includes observation, textual or visual analysis and interviews, However the most common method that is used for data collection in qualitative methodology is **Interviews**.

There are three main types of research interviews:

1. **Structured Interviews** – This type of interviews is started with verbally administrated questionnaires, in which the recipient is asked most of predetermined questions. Consequently, they are relatively fast and easy to researcher.
2. **Unstructured Interviews** – This type of interviews is normally started with a simple open question such as, what is your experience on incorporating communication strategies in IT Projects? And then the interview would further proceed based on the recipients answer to the first question, normally these interviews are time consuming and can be difficult to manage for researcher.
3. **Semi-Structured Interviews** – This type of interviews consists several key questions related to the research topic; however, this type of interviews provides flexibility for both researcher and recipients to diverge from the topic to pursue a new idea or new response in more detail.

In this specific research, the researcher would start to gather the primary data through a sample survey sent across to the email IDs of the recipients and then collect the data received through this survey and analyse it to proceed further. The Secondary data would be collected through both structure and semi-structured interviews with IT project managers and IT Business Analysts based out of Ireland. The researcher would then gather information from both Primary and secondary data sets and draw a conclusion which in turn help to answer the research question.

## 7.3. Data Analysis

According to Craig&Douglas, (2005), there are two types of data collection techniques:

1. Qualitative Technique
2. Quantitative Technique

The researcher in this topic, prefers qualitative data analysis technique, which would help researcher in enhancing the information needed to drive better conclusions. The qualitative data would be analysed through structured and semi-structured interviews. The data gathered in the interviews would be converted into text form for documenting purpose.

Researcher would perform analysis on the data points collected through interviews in a manual way, rather than using any latest tools and technologies, the idea behind doing this manually is to gather all possible information and researcher feels the personal touch would definitely benefit in gathering good information which would benefit the research.

#### 7.4. Background on participants

Participants were mostly selected from a global IT organisation and experts chosen had extensive knowledge and immense experience in managing projects in IT Industry. The participants consist of Project Managers, Business Analysts, Data Architects who managed IT projects, with different levels of business experience and different educational backgrounds.

Job titles of the participants includes project managers, Business Analysts, and Data Architects. Ages ranged from 26 - 55 years. The participants' years of experience in managing IT Projects averaged minimum of 4 years. All participants in this research held various positions in IT industry as project managers and Business Analysts.

## 8 Section 5: Research Findings & Discussion

### 8.1. Research Data Analysis, Findings and Discussion

#### ***Is Communication Strategy a mandate requirement during project planning?***

Respondent 1,2, 3 and 4 says that, "Yes" it is mandated to have a communication strategy during the project planning, the communication strategy for the project sets the standards for how and when there is contact. You want to set the tone for all contact about the project as the project manager. It helps you to retain project control and ensure that the necessary information is provided by all stakeholders. Set standards to connect with participants, including emails, meetings, phone calls and memos. Timing is another factor for regular communication such as meetings. Schedule weekly project meetings to discuss the progress of the participants.

According to Respondent 3 who is a project manager in IT Company, he states that As a project manager, he needs to ensure that the team members and the stakeholders are well informed of what he expect of them – their roles and responsibilities and other time constraints that prevent them from accomplishing the task on time. As the project manager, it is also his task to keep them informed of project details and progress.

According to Respondent 1, who is a Business Analyst in an IT organization, he states that All projects are fluid and the Business Analysts needs to prepare for the challenges that he will face from the start until the project completion or end. To ensure effective communication throughout the whole project and team, a communication plan needs to be developed at start – planning stage. The communication plan will contain the type of communication required during specific meetings, who needs to be communicated with, the frequency of communication needed, and the needs to be communicated.

According to Respondent 2, who is a Data Architect in an IT Organization, she states that in order to communicate information, it is important for project managers to have daily access to the information for a given project. There may be stakeholders in need of project information such as scope, objectives, risks, success metrics, Adherence to a system of regular and focused communication can prevent misunderstandings and delays that can cause failure in any project.

To Conclude, Project success depends on effective communication and this is the importance of communication in any project. Improving communication maximizes success and minimizes risk. In addition, if a project manager can develop effective communication with its stakeholder, this may mean more projects for him and the team. communication skills.

### ***What are some of the best practices while designing communication strategies for IT Projects?***

According to Respondent 1 he states that every project manager should Consider having two plans, one a basic summary plan of your communications and the other a more comprehensive communication plan, while designing your project communication plan. Of course, a basic summary plan can be successful and adequate for smaller, less complex projects. Any communication planning's goal is to establish dialogue with stakeholders that controls their project expectations—which means supporting and championing the project.

According to Respondent 2 he states that it's important to collaborate with your project team, while building your communication strategy, not by yourself. Focus your plan on stakeholder's communication needs (consider the three issues discussed in this paper earlier). The communications before the start of the project are probably quite different from communications after the start of the project, throughout the project and again at the end. Yet relations will certainly change if there are issues that need to be resolved with participation of stakeholders. Initial project interactions will concentrate on socializing with stakeholders on the project. Discuss the project in depth, answer any questions and ask for project help from stakeholders. Discuss how the project is going to interact as it progresses. Such correspondence should be made before speaking with stakeholders on specific needs. Use this first contact to establish a relationship with stakeholders, preferably in person or in a virtual environment (videoconference call). Too often project managers neglect this important initial dialog and instead move into discussing what they need from stakeholders and by when, without really addressing the project in depth. Imagine how you might feel as you walk down the hallway and are pulled aside by someone who tells you that you need to do something to help them by a certain date. You are not as engaged or motivated to do so.

According to Respondent 3, Any project manager's challenge is to determine who needs to know what and when. Balancing the distribution of information between stakeholders is essential. Some will want to communicate more than others or need to connect with them. Some are going to prefer email updates; others are going to prefer face to face meetings. The goal as project managers is to reach all their stakeholders in order to keep them engaged and committed to the project while reducing the time spent communicating with stakeholders.

Knowing the stakeholders with whom they interact is relevant here. To do this, relationships need to be built with the stakeholders.

Once the project manager gets to know them, they're better able to your message as you understand how you need to interact with them in order to be effective, productive and communicate your message as quickly as possible. Building relationships with the partners also helps build trust and confidence around the project between you, them and the project team. Confidence is a key component of effective communication with others (Arredondo, 2000). Stakeholders who feel they can have confidence that you are more likely to share information with you and be involved in the project.

Project Managers are more likely to provide you with what you need to achieve the project's objectives—whether to complete tasks, provide information, answer your questions or be a project champion. When we don't have faith between the project manager, project team, and stakeholder community, we concentrate on our disagreements rather than places where we might be in agreement.

According to Respondent 4 Remembering your stakeholders and your relationship with them when developing your communication strategy. Will you know who it is? Have you ever interacted with them and if so, how did you interact? Have you ever worked with them without wanting something from them or needing something from you? When you answer these questions "no," you need to start building a relationship with your stakeholders in order to communicate with them effectively.

If you worked with them before but had poor interactions with them, consider that you need to start rebuilding a relationship with them from the beginning before you can engage them effectively in the project. Yes, on your part, this takes time and effort. Before they need such relationships, though, the best project managers worked to establish relationships across the company and with potential stakeholders. If these partnerships are not in place, your first engagement strategy needs to focus on reaching out to stakeholders to build relationships and start building trust.

To Conclude, it is important to follow some of these best practises while designing communication strategy and also to ensure all the below components are present in the communication plan to ensure that the project is delivered in quality and timely manner.

Communication plan should capture the following elements:

- With whom you will communicate (e.g., leadership team)
- What will be communicated (e.g., status report on project)
- When you will communicate (e.g., monthly)
- How you will communicate (e.g., at the leadership meeting)
- Format for your communications (e.g., presentation at the meeting)

The simple communication plan enables for a high-level overview of your communications with stakeholders. By focusing on stakeholder groups (e.g., leadership team), it enables for more effective and efficient communications. Unless there is a pressing reason to do so, I want to keep my stakeholders grouped for communications rather than communicating with

every single individual stakeholder. This enables me to better control and manage my communications overall and reduce the time I need to spend in communications.

***Do existing communication tools and technologies completely satisfy the key requirements required for developing effective communication strategies?***

Respondent 1 found that current communication technologies used in IT projects almost satisfy the key needs for IT projects by increasing the productivity of their resources and improved performance but respondent stresses that present communication technologies still can't beat face to face interactions in which one can read the body language of participants and potentially develop a stronger rapport. On the other hand, sometimes not seeing the person face to face also prevents people from judging one another based on looks.

Respondent 2 says no. Respondent explains that project teams in IT industry have to integrate zone difference factors. There are few drawbacks using current technologies such as emails that fully does not satisfy the needs of project teams. For example, in the case of Skype though it is effective when there is web slow down the technology does not portray the same experience as usual due to low-standard bandwidth.

Respondent 2 recommends that development of present technologies is utmost in order to increase the communication effectiveness during the project lifecycle. Development of current communication technologies should be made based on the user feedbacks.

Respondent 3 says Yes. Present communication technologies are meeting the needs of each specific team and it minimizes the potential issues associated with project team communications and the team is able to work effectively using the current tools.

For example, in case of video conferencing non-verbal expressions of virtual team members such as facial expressions can be noticed. Moreover, it enables the project managers to identify whether the stakeholders are satisfied with the decisions. Respondents concludes that current communication technologies such as Zoom, web-ex and skype entirely meet the needs of project team in IT industry and it also reduces miscommunication, information overload and improves the stakeholder engagement.

The respondent 4 says no. Respondents explains that still most of the project teams use email, telephones in spite of advancement in communication technologies .Respondents stresses that start-up project teams are not using the available tools and communication technologies such as slack, Ryver, Skype, Zoom and WebEx .Respondent 4 states that stakeholders are not been taught how to use the tools properly and moreover they follow incorrect processes and procedures which results in project failures. Respondents recommends start-up project teams to use video conferencing communication technology, which incurs low cost to improvise their performances.

***Are IT Companies being open in implementing new communication technology in IT projects? And what are some of the future technologies that can be used while developing communication strategies?***

According to Respondent 1 it's a No, because he states the implementation of technological change in an IT organization presents a different set of management problems than the work of professional project management. The project managers responsible for shepherding a technical innovation into daily use, however, are often better equipped with education and experience to direct the creation of that innovation than to oversee its implementation. Those who manage technological change often have to serve as technical developers as well as implementers. As a rule, one company designs the technology and then distributes it to consumers who are less professional but competent about their own application areas. Nevertheless, in reality, the consumer organization is often reluctant or unable to assume responsibility for the technology at the point in its evolution where the development group wants to hand it over. The implementing person— whether located in the developing organization, the consumer organization, or in some intermediate position— must design the hand-off to make it almost invisible. Hence according to Respondent 1, it is very difficult to conduct user training for business stakeholders, hence they prefer to go with existing technologies.

According to Respondent 2 it's a No, because he states that Most creators of technology would admit disappointment that technologies are not immediately embraced. Believing that an invention will sell itself may be overly optimistic, but over-selling the new system is equally dangerous. In particular, new communication technologies are vulnerable to hype. For example, media articles on robots and artificial intelligence raised expectations far higher than current technology warrants ' actual performance. Potential consumers are increasingly becoming disillusioned when a lot of technologies are performing below expectations. When an IT company developed software for artificial intelligence to be used in communication technology, the outside world thought it was a finished product even before it was out of the testing environment. Months before they had their hands on the technology, their clients were faced with concerns about how they liked it. The disparity between perception and reality could be traced to an early project manager's aggressive effort. Knowing how important it was to sell the idea to management, this enthusiast had spread his campaign to nearly everyone listening. Since it was a new subject, much attention was paid to the new artificial intelligence program in the media as well as in organizational newsletters. This oversell presented a problem for managers of execution, who had to battle the impression that their project was far behind schedule and that their product delivered less than expected.

According to Respondent 3 It's a Yes, because she states, it's important that the IT organizations are updated with latest tools and technologies, however according to the respondent they are few key things that needs to be considered before implementing these new changes:

- ▶ **Making sure that the tool benefits the stakeholders and project team** – It's important that the tool that we bring in should have benefits to stakeholders as well, not just making the project managers job easier. It happens in IT industry that most of the tools that gets proposed benefits only the operations teams but not the business teams.
- ▶ **Inform in Advance about the implementation** – Communicate well in advance to all the key team members in project team as well to the stakeholders that we are planning to bring in a new technology to design our communication strategy, make sure to inform about how this tool supports the overall project activities and how it also aligns with business objectives. It's also important to involve key stakeholders early in the implementation to get the buy in and support during implementation phase.
- ▶ **Bring in the hierarchy to support implementation** - Negativity in the workplace can spread easily. Enlist a few people at all levels to help us understand the new technology's benefits. Show the clear benefits and expected results of the new solution to your champions so they can quickly vocalize and show their support. Make sure that your entire senior management team is behind the transition and will work as champions themselves.
- ▶ **Make sure to send out release communication and strong change management** - Nobody wants to sit through a boring session of preparation. If this is done effectively, the participants will not even know that they are learning (or that they are being asked to change). Seek a lunch and learn or put a little fun into your presentation and make a celebration of your launch. Do what work best for your people and culture in the workplace.
- ▶ **Consider different learning styles and needs** - We all absorb information differently, whether we are an auditory, visual, or kinaesthetic learner. Adapt the training sessions to all types of learners by offering a range of learning materials and tools, including guides, live instruction, and videos. Be available for one-on - one support for those who need the extra amount of personal assistance.
- ▶ **Make it Personal** - It creates more apathy than workers who do not understand a new tool's personal value. Let people know why they are worried about this and how it will affect their daily work. Make sure workers understand how it is going to help them, not just the company. Make sure that your new technology is ready for use and that all users are loaded with relevant data. Help them get more value from the new system quickly than they invest in it. As we tried to introduce or learn a new technology, we all faced challenges. While attempting to sympathize with those who are dealing with transition, applying the suggestions above will go a long way to effectively integrating the new technology.

According to respondent 4, it is a yes, He states that it is very important that the organisation evolves by implementing the new tools and technologies, it's the only way to reduce manual effort on these kind of activities, it also enables the human mind to get the free space where they can think of innovation, it is now being a trend where all organizations are driving towards innovation and this could only be possible if the human resources who is working in these organizations, have enough free time to think through innovative solutions.

To Conclude, it is important that the organizations, invest on new technologies, however they should make the tools and technologies that we are bringing into the organizations, should also help key stakeholders and align the outcome of the tool directly towards business objectives. It is also important to have a proper change management in place to make sure everyone who is working on the tool have proper user trainings, so that the tool can be used effectively during all the different stages of project.

### ***What are the top barriers that will prohibit implementation of the future communication technologies?***

Respondent 1, 2, 3 and 4 says that according to them top three barriers that would prohibit implementing new technologies are:

#### **Security challenges**

Security is always one of the major concerns in IT industry, because there would be critical data that travels through this technology, it is very important that the key stakeholders involved in the project are well aware of these changes in technology. Everybody knows that relying on old and outdated technology causes trouble, but it is important to remember that the introduction of new technologies often entails security risks.

Implementation of poorly executed technology can easily leave your business open to threats that previously were not even a factor. Implementing a cloud storage service, for example, without addressing critical factors such as data encryption and access control, is a catastrophe formula. Many businesses often attempt to cut corners to save time and money, depending on default facilities and hasty migrations. When implementing any new technology, cybersecurity should always be a top priority, rather than something that's just tacked on at the end. Innovation is all well and good, but you must ensure its fully protected with multi-layered defences and is compliant with industry standards.

#### **Team acceptance for embracing the new tools**

According to Respondent 1 and 2, another major challenge in implementing new technologies is the acceptance factor, it becomes very difficult to convince the business teams and operations team to change their technology platforms to latest and updated tools in market and they believe one of the most common reasons for implementing new technology is that many see it as a destination rather than a path. All too often technology enthusiasts are implementing the latest technology simply because it is a popular trend in the industry without giving much thought to the people who actually use it.

According to Respondent 3 and 4 Adopting new technology requires strong leadership skills and the transparency needed to achieve buy-in throughout the organization. No one wants to be forced to learn how to use a new system just because it's new; what matters most is that your technology aligns with the unique needs of your employees and your customers. If

there are no clear end-user benefits, adoption rates will be low, and the first casualties will be morale and productivity.

Finally, to conclude, New technologies should be integrated into existing business processes in a way that keeps disruption to a minimum. Focused implementation tends to be more effective than trying to use one tool to solve every problem for every member of your team. This also reduces the need for additional training. Of course, there will always be some onboarding necessary with any new technology implementation, so be sure to include training costs in your budget.

### **Resistance to Change**

According to Respondent 3, he believes that some people are early adopters; they easily embrace new technologies, and they can't wait to use it. Others are more resistant and prefer the familiar's comfort. Those two (and combinations in between) will always be in the team. The former need not be convincing, while the latter must be won over. You can do this by including them in the process of selection and preparation and showing them that they will benefit from the new technologies. Enable them to voice their concerns and find a way to deal with them. Set clear standards that must eventually be met by all those who need to use the new technology.

## **9 Section 6: Conclusions, Research Limitations & Recommendations**

This chapter contains the conclusions, limitations and recommendations regarding the findings of this research, In IT organization, Internal and external Communication are very important to project success. External collaboration relates to information process management or contact management to fulfil external stakeholder expectations **(Johannessen, 2012, p. 30)**. The understanding of communication becomes useful when the scope of projects is minimal, internal and external communication increases when the exchange rate is high. **Engwall (2002, quoted in Johannessen, 2012, p. 31)** addressed the main reason for the failure of the project; highlighted the inadequate leadership (coordination, preparation and technical solutions), resistance to significant, insufficient resources and changing priorities.

The purpose of the study is to gain a better understanding of communication technologies and to investigate knowledge among project managers and project team members of IT industry. By answering the research question and achieving all the stated goals, this research aim was accomplished. A description of the results is given in the following section.

### **9.1. Conclusion**

This research offers a rich image of the use of communication strategies and teamwork in an IT project through project team members and project managers. The findings of this research indicate that developments in current and future communication technologies have a crucial role to play in promoting project success. The results and findings of this research should be useful for IT organizations faced with a growing collection of media and technological opportunities and with the challenges of learning how to choose the correct communication technologies for their projects, resulting in an increase of resource efficiency and project team performance.

The main purpose of this study was to explore the trend of how successful projects by project teams in the IT sector use communication technologies to ensure success, and analysis includes results from literature review and semi-structured interviews with project managers, business Analysts and Data Architects. The researcher transcribed and analysed the findings of the LinkedIn and skype interview conducted as part of this research. Research finds that reviewing literature on the use of present and future communication technologies in global IT projects has had a significant impact on the overall project deliverables and by implementing new technology it also helps in designing and effective communication strategy which in turn helps in delivering IT projects in quality and timely manner, Communication technology is just as important to create a sense of unity that is scarce among project team members.

The research also aimed to compare emerging communication technologies in order to better understand the obstacles to future communication technology implementation. The key research question was to find out how communication strategies play a crucial role in delivering IT projects in quality and timely manner.

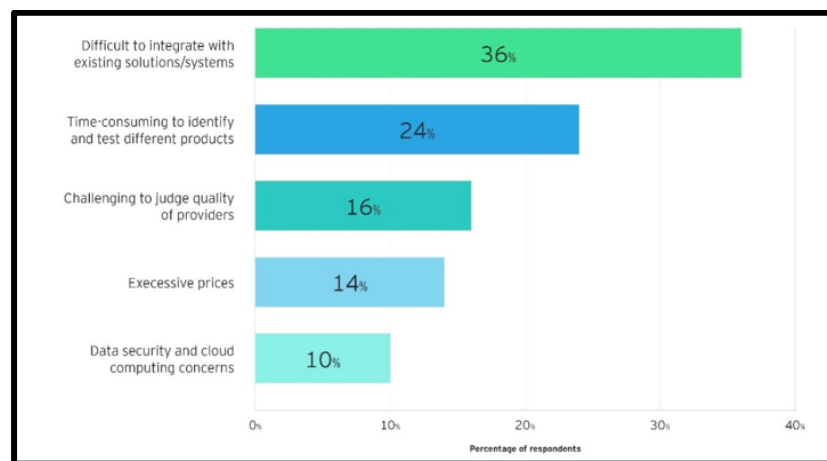
Based on the data analysis, Researcher found out about some of the current technologies that are been used in designing communication strategies in IT Industry are, Video conferencing, Zoom, Skype and WebEx. Both IT project managers and Project team members say that the configuration and implementation of video conferencing and web-ex communication technology are versatile. Video conferencing saves time and costs. All virtual team members complete their tasks within the given timeframe by interacting through videoconferencing and web-ex, there is a strong positive correlation between video conferencing, virtual team members and success of the project. **(Edara and Korrapati, 2010).**

Another key Important thing this research focuses is implementing some of the latest technologies in communication platform and what are some of the barriers that prevent in implementing these new technologies.

When The question was asked to respondents, whether they would consider introducing potential communications technology or improving existing communications technologies that would impact on project success. It could be seen from the interview analysis that due to massive projects planned and delivered in IT Industry on day to day basis, most of them would recommend IT organizations invest in advancing present communication technology. Though investing in future communication technology results in better communication strategies and effective communication plan.

Because all respondents in this research were professionals with experience working on projects in global IT Industry, the outcomes and findings collected could be deemed recommendable. The study also showed that IT companies investing in communication technologies would be the biggest challenge. It could be concluded from the interviews that advancements in communication technology with proper research and strong change management processes in place, IT companies are open enough to bring in new tools and technologies.

Based on the below graph, these are some of the challenges, the project manager should overcome before implementing new technologies.



*Figure 11 Challenges in Implementing New Technologies*

The researcher asked the question to all respondents proposing current communication technologies that completely meet the needs of the IT industry's projects. The response was no. We emphasized that video conference technology like Skype, WebEx and Zoom offers high benefits and increases the efficiency of communication plan, however All respondents recommend that IT organizations invest more successfully in new communication technologies such slack, Ryver, web 2.0 and other communication technologies and have a positive impact on communication strategy.

The other factors such as leadership, which solves technical problems such as miscommunication and information overload. The researcher argues that outcomes should also be a starting point for IT project managers and project team members working in various locations to tackle international issues and technical issues related to the use of communication technology. To conclude, the researcher would like to highlight that communication strategy is one of the mandate documents during the project planning phase in order to avoid project failures and it is also derived from data analysis that IT companies are open enough to implement new technologies in communication platform, however there are some barriers highlighted by industry experts which needs to be taken care before the implementation phase to avoid implementation failure.

## 9.2. Research Limitations

This research followed a standard approach to define knowledge among project managers and virtual team members of communication technology. Nonetheless, understanding the main limitations of this study is crucial and they are as follows:

- ▶ The research method conducted is of a qualitative kind. Five IT professionals were interviewed by the researcher. These samples differ in age, gender, nationality, classification, and years of work experience. Researchers stuff Approach restricted because the time period was small. However, because Research claims that much more could have been achieved if more time and resources were available (**Benet, 204, p. 69**).
- ▶ Furthermore, the respondents refuse to disclose information about future communication technology that will create massive impact in IT sector virtual team projects.
- ▶ The study is also limited in terms of its generalization. Since most of the respondents worked in the IT field, the study findings may not be consistent with the attitudes of project managers involved in virtual team projects in the IT industry from different countries

### 9.3. Recommendations

- ▶ The main objective of this research is to find out the importance of communication strategy in maintaining the delivery of IT projects in a quality and timely manner, this question has been answered and it is proven that communication plays a key role in project success and failure based on the response received from the respondents. It was observed during the data analysis phase that it is mandated to have a communication strategy during in the planning phase of the project. Based on the above findings, the researcher recommends to all project managers to have an effective communication strategy during the planning phase of the project to avoid project failures.
- ▶ Some of the key answers received in the interview process releases information's such as communication strategy helps Project planning and project execution at faster pace, it also states that project team members are just chat/video/ audio call away from each other. It also makes sure the related information about project are travelled much faster through communication platforms like Slack, Zoom, Skype and e-mails. Another key callout was communication strategies helps to get rid of geographical barriers which is very key in IT Industry considering most of companies have global presence, Based on the above findings, the researcher recommends IT Organizations to invest on new technologies which are available in market to develop effective communication plan, because it has a direct impact on project success and failure.
- ▶ During the data analysis phase, researcher analysed some of the information received from respondent stated that there are key challenges that stop IT Companies in implementing new technologies such as security challenges, ease of implementation and acceptance from stakeholders and team members, these challenges that was

described from industry experts are real time scenarios, hence it very important for project manager to understand these challenges and be ready with appropriate solutions. Hence the researcher recommends that the project managers performs a good feasibility study before implementing these changes and also to have an effective change management in place to ensure all required participants go through a super user training to avoid last minute challenges.

- ▶ Since most respondents refuse to disclose information about potential communication technologies, more knowledge about the position of project managers and team members cannot be obtained. Researcher also suggests researching the role of project managers who adopt new communication technologies to increase the efficiency of project team resources.
- ▶ Therefore, due to the time constraint of the researcher's sample consisted of five professionals, researcher further suggests study involving larger sample sizes from various IT organizations that will help to increase awareness about communication technologies used in IT projects.

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## 11. Section 7: Appendix

### 11.1. List of Interviews

S. No	Name	Designation	Company Name	Experience	Country	Interview Duration
1	Anup	Business Analyst	VMware	5	India	30 Min

2	Zalak	Data Architect	Expedia	10	United States	30 Min
3	Praveen	Senior Project Manager	Genpact	12	United Kingdom	20 Min
4	Suhaani	Business Analyst	Citrix	4	India	20 Min
5	Anshika	Business Analyst	VMware	4	India	30 Min

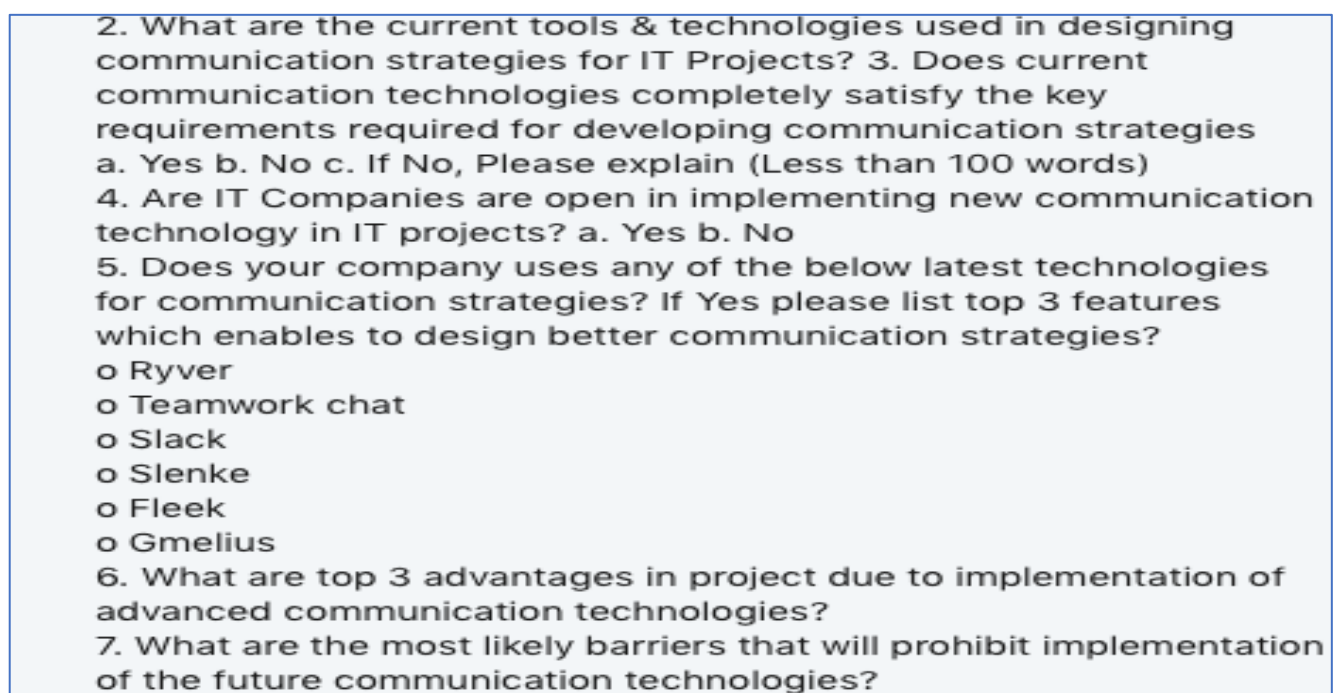
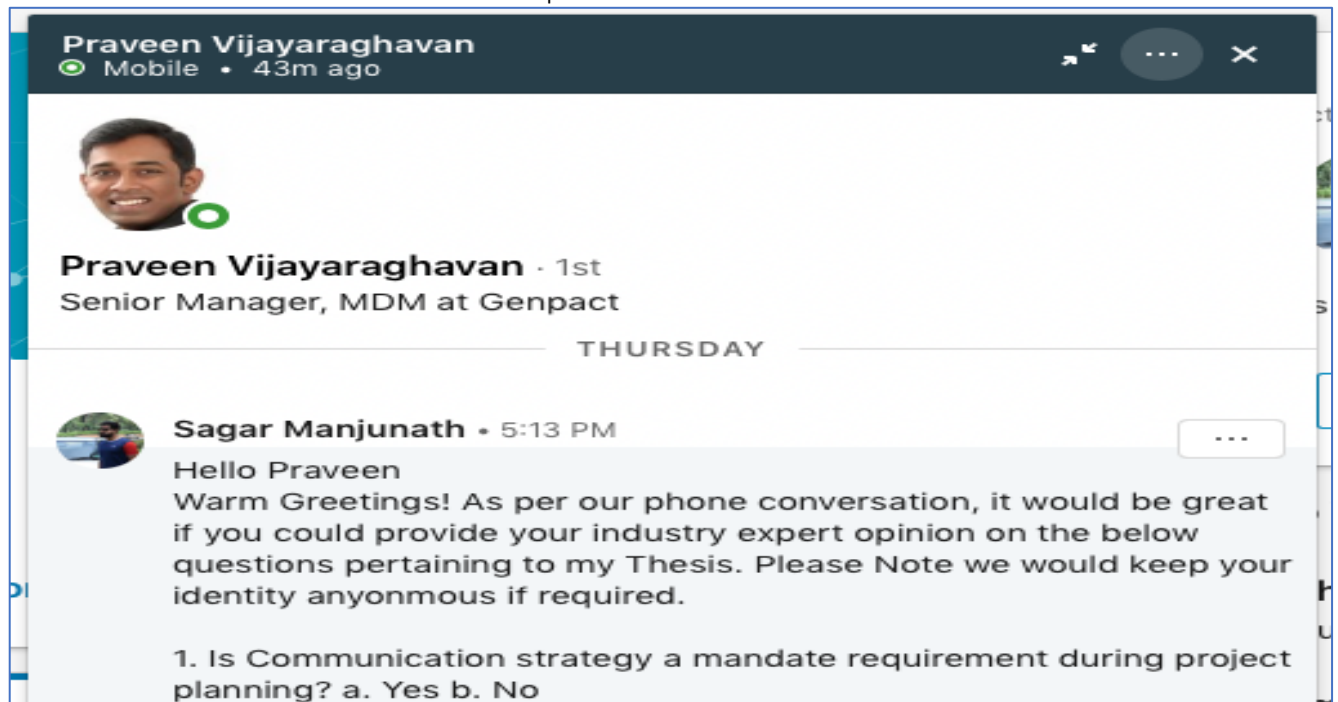
## 11.2. Interview Questions

1. Is Communication strategy a mandate requirement during project planning?
  - a. Yes
  - b. No
  
2. What are the current tools & technologies used in designing communication strategies for IT Projects? What are some of the best practises in designing communication strategies?
  
3. Does current communication technologies completely satisfy the key requirements required for developing communication strategies
  - a. Yes
  - b. No
  - c. If No, please explain (Less than 100 words)
  
4. Are IT Companies are open in implementing new communication technology in IT projects?
  - a. Yes
  - b. No
  
5. Does your company uses any of the below latest technologies for communication strategies? If Yes, please list top 3 features which enables to design better communication strategies?
  - o Ryver
  - o Teamwork chat
  - o Slack
  - o Slenke
  - o Fleek
  - o Gmelius

6. What are top 3 advantages in project due to implementation of advanced communication technologies?
7. What are the most likely barriers that will prohibit implementation of the future communication technologies?

### 11.3. Interview questions to Respondents


Below are some of the screen shots of respondents.



Civ. Systems Green Belt ICPAD (in) | Jobs recommended for you


**Anup Munavalli**  
Mobile • 11h ago

FRIDAY

 **Anup Munavalli** • 1:14 AM  
Hi Sagar,  
Hope you are doing good .

Here are my responses,based on my experience in the IT industry


1. Yes, Communication Strategy (CS) is a must and a mandatory requirement for any project planning

 **Anup Munavalli** • 1:22 AM

2. Current tools & technologies used in designing communication strategies for IT projects are as follows -
  1. Zoom for Audio and Video calls
  2. Skype Messengers/Slack for conversations

3. Microsoft Teams - a Collaborative tool to upload project documents, publish project timelines
4. Jira tool - For formalizing the project requirements and soliciting the buy in from all relevant stakeholders
4. SFDC -Case Management tool - centralized repository to capture laundry list of test case scenarios . This is really helpful for communicating the project status on regular basis
5. Microsoft Outlook for Email conversations

To the third question , my answer is Yes

 **Anup Munavalli** • 1:23 AM

4. Yes, IT companies are always at forefront in implementing new technologies



Anup Munavalli - 1:28 AM

5. Yes, Slack is the one being used. The top 3 features that enable to design better CS -

1. User Interface friendly for better user experience
2. Screen share and remote control
3. Video call



Anup Munavalli - 1:34 AM

6. Top 3 advantages are as follows-

1. Planning and Execution at faster pace . Team members are just a chat / video/ audio call away from each other
2. Total Alignment with respect to any project related development
3. No geographical barriers for the teams which are globally spread across

#### 10.4. NDA forms


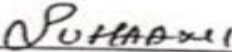
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**INFORMED CONSENT FORM**

**PROJECT TITLE:** The Role of Communication in Maintaining Quality and Timely Delivery of IT Project Activities

**PROJECT SUMMARY:**  
The main objective of this research is to understand the role of Role of Communication in Maintaining Quality and Timely Delivery of IT Project Activities. Communications play a major role in any project's progress. The researcher also performs research on the features of some of the latest tools and technologies that are available in market and collects the feedback from industry experts on key barriers that will forbid IT companies to implement these future communication technologies.

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

 _____ Participant's signature	 _____ Participant's Name (Printed)
_____ Student Name (Printed)	_____ Student Name signature

**SAGAR MANJUNATH**

Date 21/12/2019  
Dublin Business School

2019

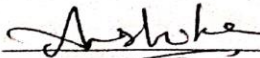
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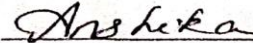
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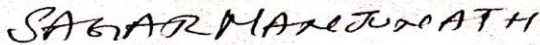


Participant's signature



Participant's Name (Printed)

Student Name (Printed)



Student Name signature

Date 23/12/2019  
Dublin Business School

2019

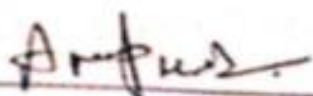
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Participant's signature

ANUP  
Participant's Name (Printed)

\_\_\_\_\_  
Student Name (Printed)

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Student Name signature

SAGAR MANJUNATH  
Date 23/12/2019  
Dublin Business School

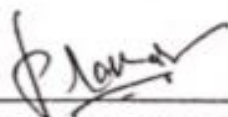
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Participant's signature

PRAVEEN

Participant's Name (Printed)

Student Name (Printed)

Student Name signature

SAGAR MANJUNATHI

Date 21/12/2019  
Dublin Business School

2019

