

# OVERCOMING ERP IMPLEMENTATION CHALLENGES WITH COMMUNICATION

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## **Abstract**

To stay competitive, organizations look to IT systems such as ERPs to assist them in their business goals. While there are organization-wide benefits available for organizations that successfully implement ERPs, the associated risks are great, and many challenges threaten to harm the process. While there are many success factors for implementation success, this paper focus on the aspect of communication in ERP implementations, specifically that between implementing consultants and the target organization. There is a lack of research on the area of communication in ERP implementations, especially from the viewpoint of the implementing consultants. The purpose of this paper is to better understand the role of communication in ERP implementations, and further build upon the existing body of research. Two main research questions are formulated, aiming to find out if communication is important for ERP implementations and what effective communication is. Secondly, this paper seeks to identify the main challenges as perceived by implementing ERP consultants, and how communication can aid in overcoming these. This paper adopts a qualitative research methodology, with semi-structured interviews held with the respondents. Key findings of this paper are the definition of effective communication as primarily fast, correct, well-timed, open-ended, and tailored to the recipient. Furthermore, communication method and communication content are both important to the quality and effectiveness of communication. Communication is however a challenging task for all stakeholders and demands everyone's dedication of time and resources. Secondly, the most important challenges identified are setting, managing, and realizing expectations, which can be addressed through clear and thorough communication from the start. Moreover, user acceptance is recognized as a highly challenging aspect of implementations, which can be helped through proper communication and guidance from the implementing consultant to all affected stakeholders, as to ensure dedication. Conflict is another challenge that is commonly viewed as exclusively negative. This paper challenges this idea, arguing that conflict can be fruitful under certain circumstances. When conflict is negative, it often stems from poor communication, and can be solved by effective communication. Also, personal chemistry and unclear project roles are identified challenges for which communication might help. In conclusion, communication has an important role to play in implementations, and can aid in overcoming many frequently encountered challenges.

**Keywords:** ERP, Implementation, Communication, Challenges, Effective Communication

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# 1 Introduction

The introduction of this paper is split into four parts. The background serves to introduce the topic, giving some background to important concepts as well as motivating the importance of the topic. Furthermore, the background section highlights some of the common themes that have been found to impact implementation success overall. In the Related research section, this paper accounts for some of the research that has previously been conducted on ERP implementations and the link to communication specifically. Also, this section serves to highlight how this paper sets itself aside from what has previously been studied. The Problem discussion discuss the perceived problem and positions this paper in terms of why it's needed, leading up to the Problem statement, purpose, and research question.

## 1.1 Background

In today's IT business landscape, instant accessibility and overall optimization of business processes are more important than ever. To facilitate these demands, cross-departmental cooperation and information sharing is paramount (Avvaru, Bruno, Chiabert, & Traini, 2020). To stay competitive and keep up the pace with constantly changing demands and innovation, companies look to IT systems to assist them in their business goals. Enterprise Resource Planning (ERP) are IT systems consisting of several integrated business management software's that allow companies to not only collect data and information, but to appropriately store, manage, access, and make use of the information within an organization (Davenport, 1998). An ERP system consists of ERP modules that make up the different business departments such as sales, production, distribution, HR, and logistics, to name a few. The modules of an ERP system are entirely dependent on the needs of the organization, incorporating the modules that are of use in a specific company (Tota, Govindaraju, & Amaranti, 2016). The acronym Enterprise Resource Planning was first coined in 1990 by Gartner Group (Robert Jacobs & 'Ted' Weston, 2007), who thought of ERP as a logical upgrade of the contemporary Manufacturing Resource Planning II systems. This is referred to as the first era of ERP. According to Gartner (Meulen, 2020), ERP is now in its fourth era, having changed and evolved ever since the initial coining of ERP. ERP is no longer merely a technology that businesses make use of, but a business strategy in and of itself.

Two important concepts that will be commonly used within this paper are "Challenge" and "Effective". We wish to define these concepts beforehand to increase understanding of this paper. This paper defines effective as something, for example an act, being done well, producing or achieving the intended result or effect. Furthermore, in this paper, a challenge is defined as a circumstance, a situation, or an obstacle that require effort of those involved to be successfully overcome.

As the importance of making use of ERP systems have increased (Johansson & Newman, 2010; Rollender, 2021), the risks that come with investing in them and implementing them are becoming more obvious. According to Gartner, somewhere between 55 % and 75 % of ERP implementation projects are considered unsuccessful due to them failing to deliver according to the set objectives (Deloitte, 2021). According to another report by Panorama Consulting, 38 % of implementations in 2020 were over budget, with an average budget overrun of 66 % (Panorama, 2020). Furthermore, Panorama Consulting found that 47 % of implementations exceeded their timeline with an average of 33 %. These numbers might be hard to put in

context without any actual numbers, but there are several extreme cases in which failed ERP implementations have had severe consequences. LeasePlan attempted an IT transformation that were to take place in over 30 countries, with the implementation of an SAP system. The project did not work out as planned, and in the end, the project was abandoned. The costs of the project were close to \$100 million. Hewlett-Packard's attempt at centralizing their ERP systems back in 2004, eventually came to be considered a failure. With associated costs of about \$160 million, Hewlett-Packard exceeded the estimated project cost about five times (Fruhlinger, Wailgum, & Sayer, 2020). Lastly, FoxMeyer Drugs was once the fourth biggest pharmaceutical provider in the US, worth upwards of \$5 billion. After initiating an ERP project in 1993, the company declared bankruptcy just three years later, in 1996, blaming much of the failure on the ERP vendor, SAP, and the consulting firm hired to integrate the system. Both SAP and Andersen consulting were sued for \$500 million (Scott, 1999).

While the reasons for ERP implementation failures vary, there are some common themes. Oftentimes, more than one reason can be found. Somers and Nelson (2004) identified 22 Critical success factors (CSF) in their work. Among those are top management support, user training and education, and management of expectations. Umble, Haft, and Umble (2003) also stress the importance of education and training of users, arguing that "If the employees do not understand how a system works, they will invent their own processes using those parts of the system they are able to manipulate" (p. 246). Furthermore, Umble et al. (2003) list the three foremost reasons for ERP implementation failure as poor management and planning, changing business goals during a project, and lack of top management support. Nah, Islam, and Tan (2007) found that project management programs might be an important factor on the success of ERP implementations. Project management programs work by setting realistic and clear goals and making sure they are met. Furthermore, Nah et al. (2007) disagree with the previously mentioned success factor top management, claiming it does not have any clear impact on implementation success.

While there are many success factors and reasons for implementation failure mentioned within the literature, this paper will focus on a factor not yet discussed, namely communication. Communication is not only important as a factor in and of itself, but also as a possible enabler of many of the other CSFs, and as an important tool to combat potential implementation failure.

## **1.2 Related research**

Several previous studies have touched on the subject of communication as an important part of ERP implementations. Amoako-Gyampah (2004) compared the differences in perceptions between managers and system users on ERP implementation relevant factors. Their findings point to there being a gap between the managers perception and the user's perception regarding communication mechanisms. The paper does not, however, get into how communication can affect the perceived usefulness of technology, of overall user acceptance, or of user training.

Somers and Nelson (2004) highlight the importance of interdepartmental communication and cooperation during implementation, and as being especially important in post-implementation. Communication was considered as very important for dealing with user resistance. The focus of this paper was, however, more directed towards understanding the activities and their importance in relation to those involved and the ERP life cycle. The role of interdepartmental

collaboration and communication was also discussed by Ha and Ahn (2014), who found its importance to be strong in regards to the continuous improvement of ERP systems.

Several papers have also identified communication as a critical success factor. Ngai, Law, and Wat (2008) identified communication as one of 18 CSFs. Nah et al. (2007) had previously identified enterprise-wide communication as key factors for ERP implementation success, arguing that emphasis should be put on communication across the organizational functions and departments. Bueno and Salmeron (2008) also identified communication as one of five critical success factors that influence user acceptance of ERP systems. Similar to Bueno and Salmeron (2008), Mayeh, Ramayah, and Mishra (2016), using Technology Acceptance Model (TAM), studied communication, trust and absorptive capacity and its effects on willingness to use ERP systems. Their findings suggest that communication has a clear impact on users' willingness to use the system, and their perceived ease-of-use. There are several papers supporting the idea of communication as a CSF.

It should be noted, however, that existing research is not necessarily in agreement about the importance of communication. While some papers believe communication to be a CSF, or an important aspect of ERP projects, others do not. For example, Wang and Chen (2006) failed to find a clear relationship between communication effectiveness and project outcome, arguing that conflict resolution is more important. Maditinos, Chatzoudes, and Tsairidis (2012) also struggled to establish a clear link between communication effectiveness and successful ERP implementations.

Zhang and Xu (2009) researched communication effects within ERP implementations, focusing on factors affecting communication. The result was an evaluation indicator system. The paper has a rather clear focus on communication, rating different factors that ultimately affect communication. It does not, however, address what good communication is, and how it might aid in challenges associated with ERP implementations.

The importance of communication has also been addressed by Aubert, Hooper, and Schnepel (2013). Focusing on communication quality, the authors researched its impact on ERP implementation success, finding that the influence of communication quality differed depending on what aspects were taken into consideration and what success dimensions were used. The study was limited to one case study, making it difficult to draw any generalizable conclusions. Finney (2011) also conducted a case study, focusing on communication strategy and the stakeholder perspective in ERP implementations. The findings of the paper pointed out that stakeholders tend to have different views on how communication should be handled, arguing that there is no one-size-fits-all for ERP implementation communication strategy. Once again though, the authors write that their results are not necessarily generalizable due to the case study approach.

### **1.3 Problem discussion**

The previous section highlights some of the various similar studies that have been conducted, that in one way or another touch some of the same issues that this paper will be addressing. As ERP implementations are considered failures at an alarmingly high rate, there is a need to look at what might be done to address this problem, and ultimately attempt to solve these challenges to benefit not only the companies that invest in ERP solutions, but also the implementing consultants, ERP vendors and all stakeholders involved. While communication is considered a CSF by many (Bueno & Salmeron, 2008; Mayeh et al., 2016; Ngai et al.,

2008), and other papers have connected communication aspects as important in relation to successful ERP implementations (Aubert et al., 2013), research is lacking regarding how implementing consultants perceive communication. There is a good amount of research available on the topic of ERP implementations and the influence of communication. However, existing research does not significantly address communication in ERP implementation projects from the viewpoint of the implementing consultants. There is also a lack of science looking to identify common communication challenges. As mentioned in the previous chapter, not all research agrees on the role of communication for project success (Meditinos et al., 2012; Wang & Chen, 2006). It is interesting that the opinion on the role of communication varies between studies. More research is needed to explain what might cause this dissonance, and to look at ERP communication from the viewpoint of the consultants implementing organization.

## **1.4 Problem statement, purpose, and research question**

This paper is mainly targeted at implementing consultants looking to increase their knowledge and insight into a familiar terrain they experience daily. Organizations looking to implement ERPs might also find the contents of this paper informative and educative. Lastly, this paper is targeted at researchers focusing their work on ERP implementations challenges and communication, who might find several insights from reading this paper.

The purpose of this paper is to better understand the role of communication in ERP implementations, and further build upon the existing body of research in the area. We wish to examine and learn from experts in their field to define what effective communication is and how it is used to interpret and tackle the challenges of ERP implementations. Furthermore, related research points to there being a division among researchers regarding whether communication is a crucial part of ERP implementations or not. We aim to investigate this from the viewpoint of the implementing consultants. The two research questions are closely interrelated, as the first question aims to answer what effective communication is, and the second question aims to identify how effective communication can aid in overcoming the most important implementation challenges as perceived by the implementing consultants.

Therefore, we pose the following research questions:

- Is communication important for successful ERP implementation and if so, what is effective communication?
- What are the main challenges in ERP implementations, and how can communication aid in overcoming these?

## 2 Theoretical Framework

In this chapter, the theoretical framework of the study is presented. The aim is to highlight prior research in the area that is related to our research questions. Furthermore, the theoretical framework serves to define and describe the concepts and categories that will be used to analyze the results of the performed research methodology. The theories and papers chosen to make up the theoretical framework were selected on their relevance to the purpose and the research questions. Also, the chosen theories are clearly related to the results of this paper (4 Results) and serve as a foundation for analysis and discussion (5 Analysis).

### 2.1 The importance of communication in ERP implementations

All digital transformation today requires some form of communication (Popp, Klewes, & Rost-Hein, 2016). Communication is a broad term, as it may include anything from the communication between internal consultants, external consultants, customers, management, or anything in between. Add to that the fact that being a consultant can include all kinds of different work, work which the specific employee is in a better position to understand and communicate than a colleague who specialize in another area. Consulting is a process that is dependent on effective and continued communication between client and consultant. Effective communication allows for information to be shared easier between the stakeholders, highlighting that upholding a good relationship will create trust and in the long run, benefit both parties who are equally interested in having a smooth implementation with few conflicts (Maditinos et al., 2012).

The idea that communication is important for successfully developing and implementing ERP systems go further back than ERP. Kydd (1989) argued that effective communication was important for MIS (Management Information System) implementation in 1989, noting that communication is important for keeping uncertainty in check.

In another study on ERP implementation in Australian manufacturing companies (Hasan, Trinh, Chan, Chan, & Chung, 2011), the importance of certain factors on ERP implementation was studied. The respondents were asked to rate a factors' importance from one to five, with five being the most important. According to the respondents, the factor "Improve interactions and communication with suppliers and customers" was considered extremely important, often being given a five on the scale. A. N. Parr, G. G. Shanks, and P. Darke (1999) did not find overwhelming evidence for the importance of communication, but still a significant support for it. The authors claim that 50 % of the participants in their study viewed communication as important for successfully implementing ERP.

According to Ha and Ahn (2014), the integration of ERP systems come with the need to allocate shared resources and handling of conflicts, for which good communication and collaboration is essential. In their conclusion, they argue that communication between departments has a direct effect on the continued improvement of ERP systems. In the same vein, Allen (2008), in a paper about ERP implementations going bad, argue that interdepartmental communication is of utmost importance. In the specific study, the author looked at a problematic ERP implementation in the Dallas, Texas, Independent School District, where the school employees and system users showed an unwillingness to adapt to the new ERP system. The employees felt that the district failed to include them in the process, and to train them in the new system. Allen (2008) argued that the district should do what is necessary to allow for communication between departments, and to include users continually

and allow for more training of the employees. In another study by Worrell (2008), the importance of interdepartmental communication was once again addressed. The author concluded that organizations should look to increase departments understanding of one another and promote communications between business departments. According to (Somers & Nelson, 2004), interdepartmental communication is one of the most important factors after implementation and should be supported by the management post-implementation as much as during implementation. In their opinion, communication is important from start to finish to reduce user resistance. Wu and Cao (2010) also note, in their paper, that communication between all parties and departments is needed for a successful ERP implementation, allowing for sharing and using of each other's knowledge. The authors also point to the importance of looking at communication history such as forum talk and emails to learn about previous problems and utilizing the experiences.

One of the most time-consuming parts of an ERP implementation is communication, all the way from the less demanding phases to the important stages depend on communication being effective, according to Zhang and Xu (2009). Communication in this case might be everything from getting top managers on board, to make meetings more productive or training more effective, to clearly getting an overview of the business processes. Zhang and Xu (2009) repeatedly return to the idea of effective communication, arguing that effective communication will lower the risk of information being lost by being repeated and interpreted multiple times. Minimizing errors in communication can be done through the above, shortening the distance information travels, and decreasing the chance of there being more than one interpretation by being direct and clear in communication. Furthermore, the authors (Zhang & Xu, 2009) believe that it should be communicated clearly, that communication is of great importance to the success of the implementation.

## **2.2 ERP implementation expectations**

Communication also has a part to play in setting realistic expectations. Bradford and Florin (2003) argue for the importance of writing a business case before initiating an ERP implementation project, and (Cosmos Xulu & Suknunan, 2020) highlight the importance of communication to understand end users' expectations before implementation to realize expectations. Organizations that set realistic goals and that are aware of what the technology might do for them might enjoy greater success from their ERP system, and studies have shown that end users with high expectations experience less satisfaction and utility with finished ERP implementations than end users with low expectations (Cosmos Xulu & Suknunan, 2020). Maditinos et al. (2012) and Obwegeser, Danielsen, Hansen, Helt, and Nielsen (2019) also address the risk of disappointment organizations might face if they fail to understand what a specific ERP might do for them, and how it might do it. Overlooking the importance of initially setting clear and realistic goals, organizations often fail in establishing what their organizational objectives are in an ERP implementation. Boonstra and Govers (2009) agree that analyzing stakeholders and recognizing their expectations is paramount in ERP implementations. Furthermore, research indicates that managers deciding to implement ERPs have expectations for the system to increase profitability and competitiveness (Akkermans & van Helden, 2002; Mitakos, Almaliotis, & Demerouti, 2010), expectations that must be communicated to all stakeholders throughout the ERP implementation (Reitsma & Hilletofth, 2018).

## **2.3 Communication and user acceptance**

Much like in the case of the Dallas, Texas, Independent School District, user-acceptance is a common issue in ERP implementations. In a paper by (Bueno & Salmeron, 2008), communication is discussed as an important part of building ERP acceptance. Furthermore, the authors claim that communication activities within a company is controlled by its management. Nah et al. (2007) consider communication to be one of the most demanding activities in ERP implementations. To make ERP implementations smoother, Nah et al. (2007) argues for the importance of keeping employees up to speed about key events beforehand, such as the goal, the tasks involved, and the overall scope. Furthermore, Nah et al. (2007) says that communication within an ERP implementation should be consistent and continue throughout the project, and start early on, detailing how the implementation progresses and what the expectations are. The communication should also include why the ERP system is being implemented and how it will support change. This information should be communicated to all involved stakeholders, including system users.

Nah et al. (2007) is not alone in finding that communication is demanding. In a case study by Barker and Frolick (2003), where an ERP implementation failure is studied, communication problems are pointed out as one of the main obstacles, haunting the project from the very beginning. They argue that effective communication is hard and demands an active effort from all those who are involved. Without it, important factors might not get the attention it should. Furthermore, Barker and Frolick (2003) note that change comes with the risk of being too formidable, causing all sorts of worry among employees. To avoid this, communication needs to be clear and ongoing throughout an ERP implementation.

From the adopting company's viewpoint, it is important to communicate why the implementation will take place, justifying the change to come. According to Dezdar and Sulaiman (2011), employees further down the hierarchy need to be informed about why the change is taking place, otherwise they might resist change as they are not motivated to go along with the changes. Dezdar and Sulaiman (2011) also argue that improving the communication within an organization will ease the worry of those involved caused by the many unknowns within an ERP implementation. Better structured communication will allow for more effective communication, informing employees about what is going on. (Mendel, 1999) also highlight the importance of communication to steer free from internal turmoil during an ERP implementation. The employees of the company must be involved in the process, being informed about the why and the what(s) of the project all throughout. A paper by Madhavi Latha and Kumar (2016) came to a similar conclusion, having found further evidence to support the idea that employees should be involved, in all departments. Involving employees in the process was found to ease acceptance of users and to promote communication.

## **2.4 Communication quality, method, and frequency**

In implementations where there is a low level of understanding on why a new ERP system is to be implemented, and where the roles of those involved are unclear, difficulties can arise. This is also true when several communication methods and mechanisms are being used between those involved, such as between employees, managers and other key players (Amoako-Gyampah, 2004). Employees might feel that the current communication from

managers is too little or poorly handled, while managers might think this to be enough. Amoako-Gyampah (2004) also stress that quality of communication and frequency of communication as key factors when it comes to spreading awareness concerning why the ERP system is being implemented, and Aubert et al. (2013) note that the method of communication might be as important as what is being communicated, and that managers should take this into account. Furthermore, Maditinos et al. (2012) argue for the importance of effective communication in implementations, especially between the implementing company and the consultants in charge of the implementation. If these two key players trust one another and build a good relationship, chances are communication during implementation becomes smoother and more effective. Effective communication is communication in which as little information as possible is lost. Therefore, in the words of Zhang and Xu (2009), it is important that communication is “as direct and short as possible to achieve higher speed and fewer errors.” (p. 3).

How information should be communicated might differ depending on the situation. In a study by Finney (2011), the author finds that managers need to be flexible and adaptive in their communication, as some communication might do with a simple e-mail, while the training of end-users should be done in person. In the same paper, (Finney, 2011) found that consultants and managers believed communication in person to be the best method of communication when analyzing an organizations’ processes and needs, while users believed e-mail to be sufficient. This same division was found regarding opinions on how training should be done, where users once again felt that e-mail communication would suffice, and the consultants and managers opted for communication in person. Furthermore, the paper found that users and consultants once again differed in their perception of communication. Consultants seemed to believe their communication was more effective than what the users did. Clearly, perceptions about communication methods and communication quality were not the same between different groups of implementation stakeholders.

## **2.5 How organizational culture and size might affect communication**

Abdelghaffar (2012) argue that “The environmental factors of a country may affect the ERP adoption.” (p. 3), when discussing the external environment that affects implementation of ERP. Furthermore, Abdelghaffar (2012) believe that, especially in developing countries, solid IT infrastructure is a key factor in successful ERP implementation. This may not come as a shock, but it highlights the fact that there are several factors that play in when it comes to ERP implementations. For example, some companies might operate in several countries with varying levels of IT infrastructure and knowledge. To spot the differences between organizations and people, one does not have to look to other countries. Those involved in communication have different experiences, work at different organizations and might come from very different organizational cultures. Also, organizations have different goals and processes, with consultants, system developers, and sales personnel who might have different opinions on what is important, and how to get it done. Employees within a certain organization might have different political views, backgrounds and personalities, further increasing the complexity of the communication within an ERP implementation (Zhang & Xu, 2009). Aubert et al. (2013) believe communication in ERP implementations to be more important than in other cases of IT system implementations. The authors argue that the size of some ERP implementations is a challenge, as it makes user involvement more complex.

The importance of communication on user acceptance might suggest that communication can have an effect on organizational culture, and possibly positively affect communication to

bring about what Gargeya and Brady (2005) refers to as organizational readiness. In their paper, appropriate culture and organizational readiness were found to be important for success in SAP implementations. Furthermore, Gargeya and Brady (2005) argue that ERP implementations can change an organizations culture, and if the organization is not ready for change, ERP implementations might struggle.

Another aspect that can potentially influence communication effectiveness is Rapport. According to Tomasi, Parolia, Han, and Porterfield (2015), rapport is defined as an interpersonal relationship in which harmony and understanding of others ideas, goals, feelings and beliefs prevails, and where the individuals have a positive inclination towards each other and feelings of mutuality. Rapport is also considered an aspect of communication, specifically the act of using communication to further increase social harmony. Rapport is considered a key factor in business collaborations, and can increase the likelihood that communication participants feel comfortable enough to share and communicate clearly and thoroughly. Tomasi et al. (2015) argue that rapport can increase the success of team processes, and lead to more successful project performance.

ERP implementations also calls for the selection of project participants, project managers, and the division of responsibilities. Dezdar and Ainin (2011) argue for the importance of project teams, clear responsibilities, and work duties. Furthermore, Dezdar and Ainin (2011) describe project management (PRM) as one of the most important factors in ERP projects. Within project management we find five cornerstones: “[...] a formal implementation plan, a realistic time frame, periodic project status meetings, an effective project leader who is also a champion, and project team members who are stakeholders.” (p. 921). Assignment of responsibility is also an important part of PRM, and ultimately project success.

## **2.6 Other opinions on communication in ERP implementations**

Most research agree to some degree on the importance of communication. There are, however, some papers that question this. In a paper by Wang and Chen (2006), the authors suggest that communication effectiveness has no clear effect on ERP implementation outcome. It is stated in the paper that even though it is commonly believed that this effect exists, their study does not prove it. They do, however, note that this might be due to the fact that that their study points to conflict resolution as having a clearly positive effect on ERP implementations, and conflict resolution has a strong correlation with communication effectiveness. Thus, while it might be true that communication effectiveness is important for ERP implementation, conflict resolution is considered even more important, and their meaning might intertwine.

Maditinos et al. (2012) also struggle to find a clear link between communication effectiveness and effective ERP implementations, while also pointing out knowledge transfer as an important factor for ERP implementation. Aubert et al. (2013) reveal some similar findings to those previously mentioned (Wang & Chen, 2006), (Maditinos et al., 2012). They find that communication quality is important for successfully implementing ERP, but they also find that the importance of communication varies, filling a different role depending on how the success of an implementation is measured. Communication quality did, however, influence the user’s overall satisfaction with the development process of the ERP implementation project. In conclusion, Aubert et al. (2013) argue that communication might be of importance in some cases. It is, however, not a one size-fits-all. Communication quality might positively affect some of the factors that are used to assess project success and have little to no effect on

other factors. The authors do, in the end, attribute some aspects of projects success to communication. In particular, dimensions related to the ERP users and implementation efficiency are seen as important.

### **3 Methodology**

The term methodology is the approach which has the intention to justify the choice of method to resolve and clarify the research problem. This will be presented in this section of the master thesis (Recker, 2012). The methodology of choice for this study will be presented in the Research strategy chapter, and the conducted research method as well as the interview guide will be presented. In the research strategy section, it will be presented what components will be used for this master thesis. Furthermore, in the Research method section, the method of choice for collecting data will be displayed. Thereafter, the selected participants will be showcased, the coding of the collected data as well as how the researchers analyzed it will be reviewed. Then, there will be a run-down of the encountered limitations as well as a short reflection of the methodology of choice and its impact on the research.

#### **3.1 Research strategy**

According to Recker (2012) qualitative method strategy is established in the social sciences to allow researchers to explore social and cultural phenomena. It could include case study research, action research, and grounded theory, amongst others. The key example of qualitative methods is the study of people and the social and cultural circumstances in which they live, work, and act. Reason being, people make decisions and act the way they do is often highly relative, qualitative research methods are intended to investigate this very context, and to extend explanations for why the phenomena transpired the way it did.

Hence, to gather the information on how communication affects ERP implementations, qualitative research strategies are used. In this paper specifically, qualitative method with qualitative semi structured interviews will be conducted. Reason being that qualitative interviews require a more in-depth interview, which depicts a deeper understanding of what the respondents say (Bell, 2016).

#### **3.2 Research method**

The choice of method for the interview was a qualitative method with semi-structured interviews. This can be specified as predetermined questions with some open, follow-up questions that can be asked throughout the interview (Bell, 2016).

Before each interview, the respondents were asked whether it was permissible for the interviewers to record the interview for transcription purposes, or if the respondents would like to remain anonymous. Due to ethical considerations, questions such as these were asked to inform each respondent what was going to be used considering the information given by the respondent might be of a sensitive nature (Bell, 2016). To ensure the integrity of the respondents, each interviewee was assured that the recorded interviews would later be deleted after the purpose of the transcription as well as analysis was completed. The importance of this was to ensure the respondents integrity (Bell, 2016).

By recording the interviews both interviewers were able to give their full attention to the respondent and the process of constructing the result became more effective by transcribing each recorded interview. Each interview was led by one of the researchers, to not jump back and forth between the interviewers.

The interviews were conducted via online meeting platforms such as Zoom meetings. The online platform Zoom meetings allowed the researchers to video call the respondent which in terms made the interviews feel more personal, allowing both researchers and respondents to meet each other “face to face”. Each interview started off with a presentation of the research and the purpose of the study after which the interviewers began with the questions which can be seen in the attachments of the interview guide.

### **3.3 Design of interview guide**

The interview guide was constructed from knowledge gathered from previous journals and articles which were guided by the theoretical framework in section 2 of the master thesis. By gathering such information, the researchers were able to conduct an interview guide which would in terms further the researchers understanding of the subject. The questions were formulated with the intention to broaden the understanding of the importance of communication within an ERP project and the effects of good and bad communication as well as between the different roles in such a project.

The formulated questions in the interview guide were formulated based on previous researchers' findings. The questions regarding the effectiveness of communications were based on the studies by; (Zhang & Xu, 2009), (Maditinos et al., 2012). The authors argue that effective communication will lower the risk of long-term issues arising within an ERP project. (Wang & Chen, 2006) (Maditinos et al., 2012) discuss the different factors affecting ERP system implementation effectiveness, and the aspect of conflict is brought up. It is discussed that during ERP projects conflicts may occur and it is also suggested how those conflicts may be resolved. The questions regarding conflict resolution as well as how to manage a successful ERP project was formulated based on the findings by these authors. Apart from the questions regarding conflict the researchers strived to understand the communication between consultant and client, thereby formulating questions regarding the contacts and the association aspect of client and consultant. This question has been previously studied by Bueno and Salmeron (2008), who noted the importance of open and honest communication between the parties involved in an ERP project. Bueno and Salmeron also discuss the importance of communication for user-acceptance of a system and based on their findings questions regarding user acceptance were formulated. Finally, questions regarding knowledge barriers affecting ERP projects and how communication can assess those issues were set based on the work by researchers Lederer Antonucci and Goeke (2011) and Light and Wagner (2006)

### **3.4 Selection of participants**

There was a total of eight respondents, each with a different role as well as different years of experience within the field of ERP systems. The purpose of contacting these participants was to better understand what effect communication had on ERP projects and its implementations. By having participants with different roles who also work with different aspects of an ERP

project, the researchers were able to gain a broader perspective of how communication affects an ERP implementation. The researchers tried to reach out to customers who had implemented ERP systems. A downfall to this is the fact that the researchers are only able to grasp the implementers perspective rather than the full comprehension of the process and the effects of communication from both sides.

Respondent 1: Male, Application consultant/ ERP consultant, 4 years of experience.

Respondent 2: Female, Team leader/ ERP consultant, 8 years of experience.

Respondent 3: Male, Project Leader, 2,5 years of experience.

Respondent 4: Male, ERP consultant/ supply chain management, 1 year of experience.

Respondent 5: Male, Sales director, 2 years of experience.

Respondent 6: Male, Senior consultant, 3 years of experience.

Respondent 7: Male, Support, economic support, consult, chief consultant, 9 years of experience.

Respondent 8: Male, Project manager assistant, 2 years' experience.

Respondent 8: Male, Project manager assistant, 2 years' experience.

The respondents had similar amounts of experience working within the field of ERP, which led to certain similarities in the research findings. However, all respondents not the same amount of years' experience or shared roles in ERP projects that as previously stated could affect the outcome of the research. A greater number of participants in this study would potentially improve the results, giving the researchers a wider perspective. This means the researchers might have gotten a wider perspective on what similar roles and experience levels might foresee about the effects of communication within an ERP project.

### **3.5 Data Collection**

Data was collected from interviews, to better understand the different perceptions on the matter of the stages of ERP. The interviews were conducted in such a way that the perceptions of each respondent could be explored. The questions were structured to be open-ended and allowed the respondents to speak freely about the viewpoint of the ERP stages. The flexibility of the interviews gave the researchers a wider understanding of the findings which widened the knowledge on the matter (Recker, 2013).

In addition to collecting data through interviews a theoretical background was written (see section 2 of master thesis) to build a understanding on the topic of ERP projects as well as the different stages that are executed. By gathering insight through the theoretical background, the researchers were able to define the different aspects concerning what role communication has for ERP consultants, as well as other affiliated roles to ERP projects.

Each respondent that partook in the interviews had somewhat different years of experience as well as different roles within an ERP project. There were seven male participants and one female participant. There were no gender biases, because the questions were unrelated to the sex or gender of the participants, the focal point of each interview was on the experience of communication within an ERP project. The duration of each interview varied between 55 to

70 minutes. Respondent 6 was not able to attend in a video interview and therefore participated only through written answers. The researchers were thus not able to ask any follow up questions or add any statements that were learned from previous interviews. Clarification by email was however possible.

### **3.6 Analysis of data**

Analysis of the qualitative interviews was performed by decoding the transcripts through open coding, i.e., taking apart the full interviews and going through each transcribed interview and looking deeper into what each respondent had stated. Each statement made by each respondent was categorized and patterns between statements were investigated. One of the main objectives when coding was to understand if the roles of each respondent affected their views on how the importance of communication was perceived.

The researchers chose to use the method of open coding to analyze and understand the result of the interviews. Open coding as described by (Recker, 2013) states that it is the process which strives to discover and assess names to the concepts from the data. The researcher first and foremost went through the material and gave each concept or phenomenon a code that clarified its meaning. The codes that have something in common were grouped into categories.

### **3.7 Limitations**

As mentioned throughout the different sections of the methodology chapter, there were some limitations within the research, on being. Limited number of participants for the interviews. There were eight respondents in total who participated in the interviews which further the researchers understanding and concept of the effects of communication within ERP projects. If having more participants were possible, the researchers would then potentially have a wider and more general perspective of what the respondents thought of the effects of communication. Another was essentially that the ERP consultants that were contacted beyond the ones that participated were far too busy and was not able to partake in any interviews. Other solutions such as sending the interview guide to them and receiving written answer was only possible for one of the respondents. The small number of participants did however open up for longer interviews, enabling a more in-depth understanding of the topic. Furthermore, this study is limited by the choice of interview respondents. As this study was limited to implementing consultants, selection bias is possible. For example, some answers might have been different if the respondent was a customer, as was the case in a paper by Finney (2011) where there are some significant differences between the answers of implementing consultants and customers.

### **3.8 Method reflection**

Using a qualitative method with semi-structured interviews for a research like this has its advantages. By choosing to have a qualitative method for the research the study was able to obtain a greater understanding and was able to discover the context of the area of research, according to Recker (2013) (Recker, 2013). The qualitative method also made it possible to

obtain a more rounded perspective of the phenomenon that was studied, making it possible for the researchers to portray the findings in a more comprehensive manner (Recker, 2013). This approach was more valuable because the area that was being explored is somewhat limited. Because of the limited research, it was fairly challenging to develop a wider understanding of the research area, hence, it was of great importance for the study to collect data via interviews from individuals who were involved in ERP implementations. Having semi-structured interviews allowed the researchers to ask for clarifications if the answers were unclear or to ask follow-up questions to further the understanding of what was answered by each respondent (Recker, 2013). This approach ensures that the researchers understood the gathered context of information in a proper manner. By choosing a qualitative research method for this particular type of methodology to justify the research problem, the researchers were able to gain a greater understanding of the importance of communication from the perspective of different roles within ERP implementations.

Ensuring that the gathered information is interpreted in a correct fashion, it is important in the means of the studies validity as well as reliability. The open coding of the interviews simplified the result (Bell, 2016) and made it easier to comprehend the gathered data from the interviews. There is always a risk when interpreting, because it is dependent on the ability of the researcher's knowledge of assessing the context (Recker, 2013). It was therefore of great importance for both researchers to agree upon the interpretations of the collected data from the interviews. Generalization is a typical matter that attracts general assumptions of the statements from the respondents, and because the resulting categorization of data is a creation of the understanding of the researchers thus, it can be challenging to replicate the result of the study (Recker, 2013). As the researchers of the study only seeks to obtain a first impression of the researched area this is not seen as a large problem for the study.

## 4 Results

The purpose of this section of the paper is to summarize and highlight the findings from the interviews. The results are split into different categories and sub-categories that represent the different themes that have been identified. These categories correspond to the research questions asked. The sub-headings represent the main categories identified, while the level three headings represent the sub-categories within a category. 4.1 include one sub-category, while 4.3 include two sub-categories. The identified categories are presented in the table below, with the corresponding sub-categories also highlighted.

*Table 1*  
*Categories & Sub-categories*

Main categories	Sub-categories	Sub-categories
4.1 Effective communication	4.1.1 Open-ended communication	
4.2 Early and continued communication		
4.3 Using the right method of communication	4.3.1 Retaining good relationships	4.3.2 After completed project
4.4 Setting, managing, and realizing expectations		
4.5 Why problems arise		
4.6 Conflict and communication		
4.7 User acceptance		
4.8 Factors that affect communication		

### 4.1 Effective communication

Based on the gathered information from each interview the result indicated that effective communication could be interpreted in many ways. According to most of the respondents, effective communication was connected to fast communication as well as the right information being distributed amongst the involved parties. Respondent 3 agrees with this statement but adds that fast communication, as well as correct information is not effective if there is miscommunication occurring between those who the information is intended for: “Consultants have many long describing terms which are then shortened into abbreviations, which can be misunderstood by the customer. This makes it important for consultants to be clear in how they phrase themselves.” (Respondent 3). Beyond fast communication and correct information, it has also been stated that effective communication is when the recipient of that information dares to interfere and say that the information given is unclear and or asks for clarification about any misinterpretations. Therefore, being clear and honest is exceedingly important.

Moreover, correct information distributed from one person to the other within a project is seen as essential by all respondents. It is seen as beneficial for the project when communicating the essential information to one another is done in a proper manner. Without good communication with the correct information, the implementation projects are most likely to fail according to the respondents. A common statement between all the respondents is that with effective communication, there is a sense of clarity on what is done as well as what is needed to be done for the project to continue and become more successful when implementing.

Similar statements from respondents 1, 2, 3 and 8 make it clear that having a clear hierarchical structure where the information flows from top to bottom, with top being the project leader and the user themselves, and vice versa when the requests are made from users of the system, make the communication much more effective. As stated by Respondent 2: “There are thousands of activities that must be done within an ERP project, because of this it is important that the communication flows in a correct way”. Not only is it important for the information to flow in a correct manner but it has also been stated by all the respondents that effective communication follows when the communication is between the right people. Apart from the information flowing in the desired way by the respondents, it is also highlighted by all respondents that receiving and distributing the information in a timely fashion is necessary for the communication to be deemed as effective. The respondents state that informing about updates about the project and or system at the right time is important, as well as information about education opportunities of the system to the system users. The respondents claim that informing too early can have a negative influence on how the system change is perceived by the users. It is also stated by all respondents that informing too late about updates and likewise can consequently put the project at risk in terms of not meeting deadlines such as moving on to the next phases of the implementation.

By having effective communication, the respondents state that it improves the relationship between the different individuals involved within the project. By asserting good communication, the respondents claim that the outcome of the projects becomes better. By having effective communication, the respondents state that the clients need to become clear as well as reducing misunderstandings between them. All respondents agree that by ensuring effective communication and fulfilling the client's needs, the prospect of a recurring client is more profound. Therefore, all respondents strive to have effective communication within a project, to ensure that the customer is satisfied. Which in turn has its advantages for the respondents, as they may have a returning customer.

#### **4.1.1 Open-ended communication**

An additional aspect where the respondent all shared a common statement was open-ended communication. In conjunction with open-ended communication, it is meant that the communication between two parties is ongoing. The respondents state that open-ended communication throughout the project and not just scheduled meetings is a preferred approach while managing a project. The statements made by the respondents were very similar where they stated that with an open-ended communication, the need for checks and compromises as well as work meetings can be minimized. The time saved from not having to later step back and redo the work because of miscommunication saves time that can be used in some other way as well as saves money. It is therefore important to have a clear and open communication between the concerned individuals within the project.

Having an open-ended communication was regarded as beneficial for an ERP implementation project because it has a checkpoint function, meaning each consultant and customer can update one another when needed to inform each other on important objectives within the project. A statement made by respondent 2 which summarizes the intent of all the respondents is “for a project to be successful and to get it to what the customer wants, it is about having an initial communication and an ongoing communication. “The respondents shared some benefits of having an open-ended communication through an ERP project, such as avoidance of misunderstandings. Because of an on-going communication where there is a space for each involved parties to be able to address any issues and or positive feedback during any of the

stages of the implementation. “If complications arise it is important to keep an openness for communication to flow between individuals” (Respondent 2). Through open-ended communication the respondents share that updating clients are much more effective rather than communicating in a constrained condition.

## **4.2 Early and continued communication**

Early communication between the consultant and client is a common statement made by each respondent. Informing the client at a reasonable time, about how the project is intended to be conducted and what responsibilities each individual holds, is according to respondent 2 and 5 important to do in the early stages of the project. By informing the concerned parties, the project can be carried out in an effective way. Respondent 2, 3, 4 and 5 highlights the importance of speaking up in the early stages of the ERP project when there are some or any uncertainties or deviations within the project. By doing this the client and consultants can resolve any issue that may arise and then continue the work without having to go back to a previous stage within the project. It is important according to all the respondents that there is ongoing communication from the very beginning. It has been stated by all respondents, that because of the number of activities one has during an ERP project the importance of the information being shared promptly determines the fact that each task is done on time to fit the project plan.

All respondents share the same thinking when talking about educating the customer about the system at the right time. It was stated that educating too early and/or informing about the system to the clients too early can affect the outcome of the project in a negative way. An example of this was the fact that the clients’ users can have a negative reaction to the change and affect the learning process by not agreeing to the changes. All respondents say that informing about education of the system may lead to some form of resistance, thereby it is agreed upon by all respondents that understanding when to inform users of the system is highly important for the implementation to be successful.

One respondent speaks on the importance of continued communication with customers. Customers are investing in the ERP to boost profit and growth, not for the implementation in and of itself. Implementations are a necessity to reach the final product, which is an improved organization. Continued communication allows the consultant to keep improving the product for the customer, and this is strategically beneficial for all stakeholders.

## **4.3 Using the right method of communication**

Using the right method to communicate is an initial significance to convey the correct information. It has been stated by the respondents that depending on what method is used the information that is conveyed can be perceived in various ways. Because of this, the respondents stated that it is essential to use the right method based on the purpose of the communication. All respondents state the same facts, when it comes to integrating the new system and teaching the clients about it, it is preferred to communicate face to face. Reasoning behind this statement is that the consultants are then able to show the clients how to use the system itself in a more effective approach. When communicating deadlines and release dates, emails are preferred by all respondents. An additional explanation to why the respondent prefers using email as a tool is the fact that each word and statement made in the

email is saved and can be viewed at any other time. This is because of the possibility of future disputes. The emails serve as a way for the consultants and clients to look back at what has been agreed upon, in addition to the official agreement. Other than face to face and or email, video conferencing is a preferred method when communicating. It is stated by most respondents that by using video conferencing calls one can showcase the project from any location and reach out to multiple people at the same time.

Although to some respondents, some of the initial information shared during digital communication can be lost and/or misunderstood. Respondent 1 states that some clients may behave as if they understood a task and or initial information about the ERP system while in all actuality the clients did not fully comprehend the information shared. According to Respondent 1, 3 and 4 this is not an uncommon circumstance and can affect the projects' entirety. The respondents disclose that during a circumstance where dishonesty manifests in the end of the project, it may occur that the client is not happy with the result. Because of miscommunication and or lack of understanding of each other, because of this the project can get set back. Respondent 4 states "When communication does not occur face to face, details can be easy to miss during meetings when the customer has to explain things". Respondent 5 states that they have customers which they have never met face to face. "I think this is a new everyday way to communicate in this way. I have always liked the physical pulse to meet the customer that you can read." Respondent 5 states that they feel as if it is a new time for communication as well as that one must see what kind of communication is intended and to whom it is going to. The content of the communication is the most important factor, according to respondent 5.

All respondents agree upon the fact that the right method to communicate is important based on the situation and reason for the usage of that method. It is said by the respondents that to ensure that the right information reaches the user of the system it is recommended by the consultants that project leaders within the organization send regular reminders of changes ongoing with any active project. Respondents 1 and 3 share the same opinion on that contacting clients and their users about changes as well as learning opportunities are well perceived both by consultant and clients.

As well as highlighting the importance of choosing the right method to distribute information, all respondents share similar views on the impact of what information is carried through which method. It is stated by all respondents that the information which is shared is essential to be relevant to whom it is intended for. It is stated that the most valuable goal of communication is to ensure that the right information is allocated to the right person, as well as the importance of formulating the information in a correct manner to avoid miscommunication. It is stated by all respondents that the content of the information communicated to the involved parties within a project is vital so that the right information reaches the right individual so that the task at hand can be completed. All respondents state that a combination of both the content as well as the "how" is important and carries their values to ensure a good communication between individuals concerning the project.

#### **4.3.1 Retaining good relationships**

By keeping a good and open communication between the parties it is ensured that a good relationship will follow, which is agreed upon by all respondents. Communication face to face is used when trying to connect with clients, this method of communication helps with building a good relationship between consultant and client according to all respondents. Keeping a well-established relationship and having good communication between the client

and consultant will lead to a good implementation, which respondent 7 states is a key element. In case of bad communication, it is likely that the implementation will fail. Chemistry between parties can determine communication. “Both the client and consultant can be good communicators, but if you do not have chemistry, you can still fail, it does not click.” (Respondent 6). Honesty and being upright with communication improve the relationship.

### **4.3.2 After completed project**

Not only is it beneficial to keep a good relationship during the project but for future projects it is agreed upon by all respondents that keeping a continuing contact with the client after a project is completed is a must. The respondents highlighted the fact that they keep contact with each client because of the possibility of selling more ERP systems to the clients and/ or selling their time to help train the users of the system. Respondent 5 states that it is always easier to sell the second time than the first time due to good communication and relationships. They state that after a project is completed, a consultant or a project manager usually hands over the contact with the customer to some form of management grouping. In many of the respondents’ projects it has been shown that the clients want continued effectiveness to be improved, so maintaining good contact is a high priority for the consultants. Respondent 1 states that the main goal is long-term customer relationships: “[it is] incredibly important to maintain communication even after an implementation.”

## **4.4 Setting, managing, and realizing expectations**

When initiating an ERP implementation, all those involved, for example consultant firm, customer, and the internal and external stakeholder of these organizations, enter the project with certain expectations. Expectations is one of the most important factors found within the data, as all participants touch on the subject in one way or another, often several times. Communication plays a key role in setting, managing, and realizing expectations. Furthermore, when expectations fail to be met, conflict can arise. To begin with, all respondents agreed that initially communicating with the customer to understand why they have chosen that specific ERP system, why they want to implement an ERP, and what their expectations are, is important. If realistic expectations are set in the beginning of the project, the risk of an unhappy customer is lowered in the case of potential failure to deliver on a set time or realizing expectations. It should also be noted that most respondents tend to think of understanding what the customer wants as a recurring challenge. Two respondent argues that setting correct goals is important to be able to measure implementation success in the first place, and all respondents agree with the notion that having clear goals from day one allows for steering the project towards these goals. A common theme amongst the collected answers of the respondents is the idea that the consultant firm needs to guide the customer to the right expectations. This can be a challenge, however, as the respondents believe that customers sometimes do not know or understand their full needs, making it a challenge guiding the customers to the correct expectations, as the consultants too might find it hard grasping the full picture. Furthermore, while consultants need to thoroughly paint a picture of current workflow, possible improvements, and come with recommendations, the implementing consultant is ultimately dependent on the user sharing anything and everything of relevance. All respondents are also in agreement that communication is the most important factor in setting and understanding the expectations of the project. One respondent highlights the risk of not being totally clear in communication when it comes to setting realistic expectations,

noting that, if the consultant or customer have any doubts about a request, he or she should be totally honest and not go along with it, thinking it will sort itself later. Furthermore, a few respondents speak about the responsibility of the consultant in carefully setting the expectations. Perhaps the consultant firm believe they can implement a system according to whatever expectations or use it as a compelling sales technique. Those in control of the implementation should always communicate realistic expectations to the customer. The customer might be clear about their goals and expectations, and the consultant might believe they understand what these are. Misconceptions do, however, occur, and the final product might not always be exactly what the customer had in mind, according to several respondents.

Expectations in a project are not limited to purely functional expectations on the eventual ERP system. They also concern budgets and timeframes, for example. When touched upon, several respondents stress the fact that expectations need to be managed throughout. For every step and for whatever stage of the implementation, certain expectations follow, and it is important for the consultants and the customers to work together to manage these expectations. One respondent note that, although the goal should be to communicate to set expectations in a project, not every single detail can be accurately foreseen and managed. Communication is one part of a project that, according to the respondents, is often underestimated by the customer regarding the time it takes to communicate. This also highlights the fact that consultant firm and customer often approach projects with widely different expectations about a long list of factors affecting implementation success. One respondent discusses the idea that demanding customers might be good for the project outcome. In the words of the respondent:

Some customers challenge us. Those meetings can be perceived as being a bit challenging in contrast to other meetings where everyone agrees. The more upfront and direct customers force us to explain ourselves in a manner that might improve the implementation, making the implementation more tailored to the customer.

– (Respondent 3)

Almost all respondents spoke about the importance of including everyone involved when managing expectations. Communication plays a key role in keeping everyone informed. When it comes to users, it is especially important to manage expectations through training. Training does not only serve as a means of making users ready to work in the system, it also allows for managing the expectations of the users by showing them what they will be doing, and what their future work situation will look like. Respondents 6 and 2 speak about the risk of not including all stakeholders when managing expectations. Sometimes, ERP implementations are initiated by, and decided upon solely by people in managing positions. Several respondents agree there is an inherent risk in these cases, that those who will use the system, are involved too little to manage expectations realistically throughout.

## **4.5 Why problems arise**

According to the gathered data, problems in ERP implementation are not uncommon. The respondents agree that one of the main reason's issues arise in implementations is due to failure to realize expectations, most commonly as a side-effect of failure in communications, as accounted for in the previous segment. There are however other causes. One factor that is mentioned by respondent 2 and 6 is lack of chemistry between communication participants. As respondent 6 puts it: "Both participants can be talented communicators, but without the

chemistry, communications can fail anyways.” (Respondent 6). Respondent 2 agrees with respondent 6, arguing that sometimes, chemistry between communicators involved just is not there. Furthermore, respondent 2 uses this potential problem to speak for the importance of having clear guidelines for how the work process is to be conducted.

Another issue touched upon by several respondents is unclear project roles. Most respondents believe that a common reason for communication issues is uncertainty regarding who to turn to when facing different difficulties. Effective communication can assist in setting roles of project participants, according to several respondents. Furthermore, respondents 4 and 6 argue for the importance of having a project manager or a steering committee who can set the pace of the project. In many ERP implementations, it is not possible to always have a clear focus on communication due to other factors that require attention. Therefore, several respondents believe division of responsibilities to be important. Respondent 3 agrees with the notion that project managers are important but adds that all participants are responsible for communication and the project. Furthermore, respondent 3 mention that it is common to set roles during the sales phase, and to ask of the customer to set certain roles as well. Respondent 8 stresses the importance of having clear communication roles, as in who in the project group is responsible for communication with a certain stakeholder. Failure to communicate thoroughly with stakeholders can, according to the respondent, lead to stakeholders feeling overlooked. Overlooked stakeholders might develop a negative mindset about the implementation.

Throughout the transcript material, respondent 7 is consequently returning to the idea of suboptimization as an obstacle to project success. Specifically, suboptimization in different departments of stakeholders. Respondent 1 and 3 touches on similar ideas, namely the risk of information getting stuck on the way to the intended recipient, or slow decision making. According to the respondents, this is especially worrying in larger implementations with more participants. Furthermore, several participants speak about the risk of one communication recipient sitting on all the information, thinking he/she can keep everything in check and answer any questions, and overall underestimation of how demanding communication in implementations can be. Especially in very large projects, where there are very many participants who might seek information.

Another possible source of problems in implementations that is not very commonly mentioned, except for two respondents who are very clear about its importance, is stress. According to respondent 6, ERP consultants are currently under very high demand, as a lot of manufacturing companies are facing much higher order requests than usual. Stress can in some cases negatively affect communication, according to the respondent, having potential consequences on implementation success. To avoid this, the respondent argues that while it is easy to reschedule planned follow-ups, it is important to follow one’s priorities.

When discussing honesty with the respondents, a theme came to form around why communication participants might be dishonest. Almost all respondents believed it rare that customers lied about important aspects in implementation. Many did, however, talk about the consequences of inexperience. According to the respondents, it is more often that customers are inexperienced and fail to share everything of importance. Partly due to lack of knowledge, but also due to simply forgetting details.

## **4.6 Conflict and communication**

Conflict in ERP implementations is not uncommon, and may, according to the respondents,

be brought on by the factors previously mentioned in 4.2 and 4.3. According to all the respondents, communication can proactively avoid conflict. To avoid conflict in the first place, communication needs to work throughout a project. When communication is lacking, it is a breeding ground for conflict. Many respondents also agreed that conflicts rarely came to be without communication in the first place. Once again, many respondents return to setting and managing expectations as the most fundamental aspect of avoiding conflict. Conflicts do however arise, and whatever the reason might be for the conflict, communication is often the beginning, middle, and end of a conflict, according to the respondents. Communication is not a one-sided affair, where one participant can drive the project alone. The customer needs to be engaged, and to share the information necessary for the implementation. The consultant also needs to be engaged, and properly listen to the customer. As one respondent puts it: "If I don't do my best to understand what the customer is thinking, if I don't listen, things can go bad". (Respondent 6).

To defuse potential conflicts, the respondents point to several factors. Firstly, as mentioned earlier, communication as a solution to conflict is a necessity. Furthermore, several respondents speak about keeping clear documentation, such as notes or emails from meetings, that can be used to remind customers about what has been decided earlier, as a means of communicating about the conflict and hopefully solving it.

The perception of conflict was not necessarily the same among the respondents. For example, respondents 6, 3 and 4 all argued that conflict can be good. Conflict can challenge and ultimately lead to better results. The respondents did however note that this was dependent on the communication participants having the same intentions regarding the goal of the project. Respondent 8 argued that open communication was vital to implementations, but also to avoiding and solving conflict. Furthermore, the respondent put emphasis on using open communication so long as the conflict solving attempts are focused on the actual issue and not to point blame.

## **4.7 User acceptance**

ERP implementations come with several challenges. One of the biggest obstacles to a successful implementation is achieving user acceptance. All respondents agree that user acceptance is one of the most important factors in projects. To reach a satisfactory level of user acceptance, the first step is to include the end user in the implementation. Firstly, the customer organization and all stakeholders need to acknowledge the importance of their participation. This starts with the project group early on having a good communication with the customer organization, making sure they understand the importance of their participation and involving their end users. Then, the customer organization need to do their part to prepare their organization and the necessary activities. Most respondents agree that the customer should be assured and guided, but ultimately, the customer needs to do their part and put in the work. One respondent says: "It's important for the customer to put in the time, you can't babysit them all the time". (Respondent 4).

Resistance to change is commonly referred to by the respondents. All respondents voice an understanding for the end users. Sometimes users are used to a system that has worked wonders for a long time and might not be too fond of learning and understanding a new ERP system. According to the respondents, customers are not always the ones who wish to implement a new ERP. Many times, it is the CEO (Chief Executive Officer) or the CFO (Chief Financial Officer) who initiate the implementations, and they might not use the system

in the same way as the users, or at all. One respondent believes that “[...] The users must be involved, communication is important but communication with the right people is even more important”. (Respondent 3). The respondents believe that the reason end users are not always involved in a satisfactory way, are many. The most obvious and frequently mentioned reason for it is that customers need to focus their resources, or employees, on their usual internal work activities. Another factor that affects communication from the consultant’s view is the size of the company. When trying to reach and involve the end users, the communication channels can differ a lot depending on the organization and its size. Respondent 1 believes it can be problematic to reach end users in larger organizations, while several other respondents argue that smaller companies can be a bigger challenge as they have less resources, or employees, to spare for the implementation alone. Another potential issue with not including end users early on, is having to redo or restart implementation steps early on because the customer realizes the system is not working properly. To avoid unhappy employees, customer organizations need to include the end user, explaining why the system change is taking place. This needs to be communicated, otherwise the organization risks increasing internal resistance to the implementation. Most of the respondents speak about the importance of communication to increase user acceptance and decrease the worry of the customers employees.

To achieve user acceptance, user training is an important aspect according to the respondents. Depending on many factors, the amount of training and who is receiving it differs. The respondent organizations have different methods of deciding on training, but all agree that user training is important. Most commonly, the consultant firm will train a few selected super users who will then teach the other system users internally. The time required for training differs a lot, and sometimes this is agreed upon beforehand. Several respondents argue that communication is an important part of getting user training right. The consultant is often an expert in their system, while the end user is new to it. This calls for good communication to bridge the gap in system knowledge and understand how to transfer knowledge to the end user.

Most respondents do not mention any sort of strategy for achieving user acceptance, except for respondent 8. According to respondent 8, the organization for which he/she works uses several methods to achieve user acceptance. Firstly, they follow guidelines called ADKAR that is a model for working with change management. Furthermore, they use different techniques to map out gaps in current workflows to future workflows, and other methods to approach the problem.

## **4.8 Factors that affect communication**

As highlighted earlier, outcome and perceived outcome are not always in the hands of the implementing consultant firm alone. The customer has a great impact, and organizations tend to differ in culture, structure, leadership, and knowledge. Ultimately, the success of an implementation is decided by the customer. The respondents are all in agreement that communication before, during and after implementation is key in not only securing a satisfactory implementation functionally, but also in building a good relationship with the customer. All respondents agree that customer organizations are very different, and some are better than others at communicating both externally and internally. Factors that affect communication are many, for example, the state and general wellbeing of organizations can have a great impact according to respondent 2 and 4. Organizational structure can affect the time communication travels and negatively impact decision making flexibility, according to several respondents. Furthermore, as previously mentioned, smaller companies might find it

hard to set aside employees to focus fully on the implementation, whereas larger companies have more experience, time and understanding of the process. All respondents address the idea that organization size affects implementation communication, and most agree that there are both upsides and downsides to implementing in smaller or larger organizations. Not all respondents agree on how they differ. For example, most respondents argue that larger customers are easier to deal with, with more structure and experience. However, respondent 2 believe that smaller companies can be more flexible and quicker in their decision making, and respondent 3 argue that all customers are unique, and that the scale of implementations in larger companies is more demanding. Respondent 5 returns to the word 'maturity' as in organizational maturity, arguing that larger companies tend to be higher on the maturity scale.

## 5 Analysis

The purpose of this section is to compare the results of the interviews, as presented in the previous chapter, with existing research. Furthermore, this section discusses the limitations of this paper, and highlights how it might contribute to the existing knowledge and sets itself aside from previous research in the area. The categories in this section are similar to the ones presented in the previous chapter, although slightly adapted to fit the analysis of the categories, which discuss the results in combination with previous research.

### 5.1 Effective communication

According to the theoretical framework, effective communication is seen as allowing information to be shared amongst different stakeholders in a simple yet useful way, where the outcome of that information is communicated to fulfill a need of either a consultant and/or customer (Madhavi Latha & Kumar, 2016). The respondents who partook in the interviews claim that effective communication is fast, easy and delivers correct information at the right time. However, it has also been stated that fast communication is not always effective. If communication moves too fast, some information may be lost, which might lead to miscommunication and issues in the long term for the project. Several studies (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007) conclude that effective communication is hard and demands an active effort from all parties involved in the project.

Miscommunication between consultant and customer as a recurring issue was brought up by the respondents and the results demonstrate that concise and clear information equally as important as having a simple way of communicating and I It is highly important that there is a mutual understanding between consultant and customer for the project to reach its full potential, and not referring to abbreviations without explaining them to customers was an example on how to keep communication simple. (Worrell, 2008) agrees with what is stated by the respondents and highlights the importance of communication between not only customers and clients but also between departments within the organization. Many of the respondents clearly state that having a hierarchical structure, within the project where information flows from the project leader to the user makes communication much more effective and that information is not lost along the way. (Worrell, 2008) implies that understanding each other inter-departmental wise lowers the risk for miscommunications and benefits the ERP project by making sure that all involved stakeholders understand each other. Despite comparable views on communication from most related literature, there is a lack of knowledge regarding communication from the customers' point of view, which might make the results seem one-sided.

The results display the perspective of the consultants regarding the effect of communication within an ERP project. This limits the view on how communication impacts a project from a wider perspective. However, the participating consultants describe issues regarding communication on behalf of the customer, highlighting what the customer feels about the effectiveness of communication when partaking in an ERP project and thus minimizing the information gap. Studies (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007) show that when ERP projects fail, the common link is lack of communication. Consultants in this study seemed to believe their communication was more effective than what the users did. Clearly, perceptions about

communication methods and communication quality were not the same between different groups of implementation stakeholders. It is therefore important to have a clear and transparent communication between the involved stakeholders. Not only is effective communication agreed to be one of the most important factors to manage a successful ERP project within this study, but it can be supported by the claims made in previous research such as (A. N. Parr, G. Shanks, & P. Darke, 1999).

By having an effective communication, the respondents it was able to improve the relationship between the different individuals involved within a project which would have a positive outcome for the project. This was also concluded by (Madhavi Latha & Kumar, 2016), found evidence that supports the idea that all employees in the different departments within the project should be involved, as this promotes effective communication.

## **5.2 Using the right method of communication**

The study regards different “methods” as tools for of communication between the involved individuals within the project. As much as being clear and having a simple and fast communication, findings based on the results from the conducted interviews as well as from previous researchers indicates that using the right method is a common factor in what is perceived to have a great impact on ensuring an effective communication. Based on the findings from the conducted interviews there are some varied opinions on which method to use for what information. However, all respondents agree that face-to-face communication is the top choice for communicating. By conducting meetings face-to-face, it helps the customer to get to know the consultants as well as enables the possibility for follow-up questions, which benefits both consultant and customer. The benefits by doing this are that the involved individuals can solve any misunderstandings that may occur as well discuss new ideas surrounding the implementation process, which ensures that the consultants are able to provide what the customer wants. However, (Zhang & Xu, 2009) found that it can be difficult to physically gather all involved parties, from VD’s to end users, when coordinating meetings. Therefore, many of the respondents claim to also use video calls as a substitute for face-to-face communication. By using this method, the consultants are not only able to reach clients from afar instead of having to physically be there but also ensure a good bond between consultant and customer as well This approach was found to minimize the risk of losing vital information as well as increase the effectiveness of the communication between the two parties by the respondents, which agrees well with the findings of Zhang and Xu (2009) (Zhang & Xu, 2009). However, having face-to-face communication whether it is in person or through video call can have its disadvantages, because information may be forgotten afterwards which might lead to conflict between stakeholders and customers. When informing the customer of important information such as agreements on the project, email is a preferred method, due to the fact that using email can secure what is stated. (Wu & Cao, 2010) When using email, all information that has been shared is saved indefinitely and all parties are able to revisit it. This ensures that the customer is given what has been agreed upon by the contents as well as ensuring that the consultant provides the work that has been agreed upon between customer and consultant.

Additionally, it has been indicated in the result that, not only is the choice of method of high importance for stakeholders as well customers to have an effective communication. It has

been recognized that the content and quality of what is stated by the individuals is equally as important if not more. This is because if the right information is distributed amongst the partaking individuals of the projects, then there is a greater chance for the project to be successful. It has been stated by the majority of the respondents. (Aubert et al., 2013) ((Wu & Cao, 2010), (Maditinos et al., 2012) find that the quality of the information shared is a crucial SuccessFactors when information is shared amongst consultants and customers. Because having the correct information can affect the satisfaction of the customer. However, it depends on how satisfaction and success is measured according to. (Aubert et al., 2013) ((Wu & Cao, 2010), (Maditinos et al., 2012), it can depend on how it is interpreted. In the result it has been indicated that some of the respondents claim that the method of choice for sharing information between stakeholders is great factor in ensuring that the information communicated is done in a proper way. Depending on who the information is to be delivered to it can be of high importance that the right choice of method is of great importance. For instance, as mentioned in the previous section, to ensure an effective communication it is important that the information shared is received in a proper fashion. Using for instance email when trying to explain how the implemented ERP system works may cause confusion if the information is not clear. Thus, creating confusion and misunderstandings which in terms can create conflict or even affect the customer satisfaction. However, if the method is used in a correct manner, it can benefit both stakeholders and customer on some levels such as information being saved, making the communication between the parties more effective. Even if the stakeholder and or customer finds that the method is more important than what is being shared within that method, some risks may occur. Hence, the context of the shared information is highly important to ensure that all parties involved fully understand what is transpiring within the ERP implantation project.

### **5.3 Retaining good relationships**

With effective communication the consultants can build trust between the customer and themselves. By doing this the consultants manage to retain a good relationship with the customer.

By retaining an ongoing communication, it has been indicated that a good relationship between the involved individuals of an ERP implementation follows. (A. N. Parr et al., 1999) implies that with effective communication which is clear for the customer to understand, the customer is more likely to uphold a good relationship, which ultimately creates trust. This statement, made by (A. N. Parr et al., 1999) can correlate with statements made by the majority of the respondents that, to create a trusting relationship with the customer it is of great importance for them to have an ongoing communication. This to ensure and to enable trust between them. This can be seen as beneficial for both the parties involved. This is because having a trusting and good relationship with a customer can increase the customer satisfaction which in terms can lead to a loyal customer which is recurring. This can be beneficial for both the implementers, in the view of the fact that having a returning customer can lead to more projects, which then can lead to an increased profitability for the company implementing the ERP system. Furthermore, having a good and trusting relationship between customer and consultant is well sought after by consultants. It has been recognized in the result that a consultant would like to retain a good relationship with their customers and in the long run make a long-term customer-relationship. Nevertheless, having a good relationship is

not only beneficial from the consultant's perspective but also by the customer. This because having a better relationship with the customer benefits the communication which helps the consultant to ensure a better ERP implementation. This view has been agreed upon by the majority of the respondents as well as by (A. N. Parr et al., 1999), where the author states that effective communication is a major factor for a successful implementation, this viewed upon by the participant in their study, hence the importance of retaining a good relationship between all involved individuals in an ERP implementation.

According to the results, retaining a good relationship with the customer benefits the outcome of how well an implementation is done. By having effective communication, the customer can explain what their wants and needs are, which supports the consultant in their work. This ensures that the consultants can provide the sought-after ERP system for the customers organization, which in terms can secure customer satisfaction. This statement is supported by (Maditinos et al., 2012) who states that with trust, both parties can sustain a smoother and effective communication. Evidently ensuring the satisfaction for the customer as well as the consultant in an implementation. However, the research papers are from the perspective of the ERP implementers and can in terms differ when asking what and how communication can impact a project. Although the findings in the result, showcases the consultant's perspective of how to retain a good relationship with the customer, it is highlighted by all respondents that having an open communication and honesty towards each other is preferred. Not only is this the most preferred way of withholding a good relationship but the way to do this is through having that communication in the form of face-to-face. Thus, ensuring a stronger connection between the involved parties of the ERP implementation project. However, when information is passed too fast it might lose its effectiveness as information may be lost in transition. Due to the fact of the high importance of retaining a good relationship it is therefore of great value for the stakeholder to know how to communicate this by ensuring that effective communication is used.

## **5.4 Setting, managing, and realizing expectations**

The findings, as presented in the previous chapter, place a lot of emphasis on the role of communication in setting, managing, and realizing expectations. All respondents agreed that managing expectations of the customer was one of the most important aspects of a successful implementation. When customers have unrealistic expectations, our findings suggest potential consequences such as conflict and an unsatisfactory final product. Previous research has also identified the role of communication in setting realistic expectations. For example, Bradford and Florin (2003); (Cosmos Xulu & Suknunan, 2020; Maditinos et al., 2012) stressed the importance of writing a business case beforehand to set realistic goals, and to ultimately reach a more satisfactory outcome. When end users have unrealistic expectations, or high expectations overall, studies have shown how difficult it is to realize these expectations and deliver a product that the user feel is superior to prior systems (Cosmos Xulu & Suknunan, 2020). This is similar to the findings within this paper's result section, in which the same pattern could be observed. Previous research on the topic of communication and expectations within ERP implementation does not, however, go into the actual details of how failure to communicate can set unrealistic expectations or how this challenge manifests itself. For example, the findings of this paper point out that customers may, sometimes, not understand what their needs are, or how important it is to be completely transparent and honest. Previous

research mention the responsibility of the implementing organization in setting realistic expectations even though it might not always be the best sales pitch (Obwegeser et al., 2019). The findings of this paper highlight how complex and multifaceted management of expectations is in ERP implementations, and how important it is for stakeholders to dedicate time and resources to getting it right from the beginning of an implementation and all throughout.

While the focus of this paper is on communication and ERP implementation, it is necessary not to forget that organizations invest in ERP not for the joy of implementation, but for profitability, long-term effectivity, and increased competitiveness. These are the expectations of the customer, which ties in with the findings regarding continued communication after implementation. Both customer and consultant benefit from a relationship where the expectations of the customer are met, both initially and continually, which makes a case for continued communication after implementation to realize customer expectations long-term.

## **5.6 User acceptance**

The results of this study show that successful user acceptance is an important and challenging part of ERP implementations. These findings are consistent with the results of prior studies (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007), and further cement the importance of communication in ensuring user acceptance. Furthermore, the findings match those of previous studies that found the importance of involving all stakeholders in implementation, especially end users. For example, Dezdar and Sulaiman (2011) wrote about the usefulness of justifying implementations and informing everyone early as to avoid resistance to change. Furthermore, the authors argued for the importance of good communications to ease worry.

Previous studies on the topic do not, however, speak on the challenges of including all stakeholders. The findings point out that oftentimes, end users are unwilling to go through with implementations because it threatens to change their work too drastically and requires significant effort. According to the findings, end users often are not involved early on. More likely, implementations are initiated by a CEO or a CFO, who might have their own vision of what the system might look like. The findings suggest that this happens due to organizations having limited resources. They simply cannot dedicate all resources to an implementation as it would disrupt their normal work routines. This issue is mainly a concern of resources, but it draws resemblances to a study by Ha and Ahn (2014) in which the need to allocate shared resources is identified as one of the main challenges in ERP implementations. To tackle such issues, Ha and Ahn (2014) argue that communication and collaboration is important, which the findings of this paper further cement by showing how important it is for the consultant to clearly communicate with the customer about their involvement and dedication. As shown in the findings section above, issues with allocating resources to implementations is mainly found in smaller organizations. All respondents but one argues that reaching and involving end users is a challenge associated with smaller companies. One respondent did however argue for the opposite, which is in line with Aubert et al. (2013) findings, where larger organization size is identified as a challenge in involving end users.

The findings of this paper also tell us how important training is in reaching user acceptance. Most commonly, user training is targeted at a selected few super user who will then teach transfer that knowledge internally. Naturally, communication is a vital part of training as the findings tell us that the knowledge transfer mainly happens between consultant and end user

in person, and to bridge the gap in knowledge, communication serves as a tool to move the participants closer in terms of understanding. In a similar vein, Allen (2008) argued for the importance of communication and user training to achieve user acceptance, and Zhang and Xu (2009) found communication as an important tool in making training more effective. Furthermore, Finney (2011) also stress the importance of adapting communication according to circumstances, such as having training take place in person. It should be noted that this paper is limited to the opinion of implementing consultants, and their opinion on the importance of training is rather clear. Therefore, it is unclear if the opinion of the end user would have differed, as in the findings of Finney (2011). In that case, consultant opinion on the importance of training was in line with the findings of this paper. Finney (2011) did however also look at the opinion of the intended users and found that they did not agree with the consultant. Rather, users were of the opinion that e-mail communication would be enough.

## 5.7 Conflict

Conflict is a commonly mentioned aspect of implementations within the previous literature and is linked to poor implementation success. Maditinos et al. (2012) argue that implementations generally are smoother in the absence of conflict. The findings of this paper suggest that communication is a key factor in solving conflicts, which is similar to what Ha and Ahn (2014) found, who linked good communication to conflict resolution. Another study by Wang and Chen (2006) found conflict resolution to be a key factor in successful ERP implementations, ranking it higher in terms of importance than communication effectiveness. While Wang and Chen (2006) failed to prove the importance of effective communication in ERP implementation success, they theorize that conflict resolution and effective communication have a strong correlation. The findings of this paper point in the opposite direction, namely that effective communication is the most important factor when it comes to both avoiding and solving conflict. Conflict resolution, as pointed out in the findings, is important, but it can be viewed as more of a symptom of lacking communication rather than a feature of its own. Furthermore, this paper observes a clear correlation between conflict and expectations. Managing expectation is about continual, thorough, and proper communication, and demands the attention of all involved. Similarly, this paper suggests that conflict can occur as a side-effect of failure to communicate and care for the process. So, while communication is the solution of conflict, it is also the cause.

Previous studies fail to point out how important participation of all stakeholders is for implementation success. The customer needs to be engaged and be ready to share all information necessary. Similarly, the consultant also needs to be properly engaged, but also to listen. The findings also suggest the consultant should leverage communication as a tool to encourage the customer to share and equally care for the success of the implementation.

The findings of this paper also identify the importance of communication as a solution to conflict, especially through documentation. Previous studies do not grant any examples of how communication can be used in conflict situations, but this paper identifies possible conflict resolution methods. The consultants agree that keeping documentation such as emails and notes might be useful in case the customer organization are unsatisfied with the final product. This material can serve as a reminder to all stakeholder about what has been agreed upon previously and is one way of using communication to solve potential conflicts. Another finding points out how open communication and factual focus, as opposed to pointing blame, can assist in approaching conflict situations.

While previous research identify conflict as a risk for failure and an obstacle to implementation success, the findings of this paper are not necessarily in agreement. Rather, this paper suggests that conflict might sometimes be a necessary evil. When all stakeholders share the same goal of project success, conflict can challenge communication participants to rethink and further motivate their choices, possibly leading to a more favorable project outcome. These results highlight the duality of the definition of conflict. While it is commonly associated with negative consequences on implementation, these findings challenge this view of conflict as exclusively obstructive.

## **5.8 More challenges in ERP implementations**

The results of this paper identified a set of common challenges faced by consultants in ERP implementation projects. One challenge that was not identified in the previous research, but in the findings of this paper, was lack of personal chemistry. Sometimes, two communication participants do not get along well, despite both being talented communicators. This issue is unique in that it is difficult to measure and predict. When personal chemistry fails, a possible solution could be to have clear guidelines for the work process, so that participants can continue and get the work done despite their issue. The reasons for why this occurs is not clear. There are some similarities between personal chemistry and rapport, as mentioned briefly in the theoretical framework. Rapport is the quality or harmony of an interpersonal relationship (Tomasi et al., 2015), which similarly to personal chemistry is difficult to measure since it is a feeling communication participants have about each other and their relationship. Rapport is considered important for successful project performance, which draws some resemblances to personal chemistry as identified in this paper.

Unclear project roles are another common challenge identified in the findings. For example, who oversees what, and who to turn to for questions. These findings are similar to those of Amoako-Gyampah (2004), who also identified unclear roles as a cause for problems. Project managers or steering committees were identified as important roles to have in a project, and is in line with the findings of Dezdar and Ainin (2011) who discuss the importance of project roles and clear responsibilities. Furthermore, these findings stress that all participants within an implementation are responsible for the project and the communication within it. In previous research, interdepartmental communication is commonly found to be a major factor in successful implementations (Allen, 2008; Ha & Ahn, 2014; Somers & Nelson, 2004; Worrell, 2008; Wu & Cao, 2010). Some similarities can be found between the issue of unclear roles and that of interdepartmental communication. For example, interdepartmental communication is any communication in which stakeholders in different departments communicate, and for interdepartmental communication to function, there need to be clear roles regarding who oversees what process. If roles are unclear, interdepartmental communication becomes a challenge.

## 6 Conclusion

The purpose of this paper is to better understand the role of communication in ERP implementations, and further build upon the existing body of research in the area. To achieve this goal, two main research questions were posed. The first research question of this paper aims to find out if communication is important for successful ERP implementation and define the meaning of effective communication. This paper recognizes that having open-ended communication between the involved individuals of an ERP project is of great importance. This paper shows that effective communication is communication that is clear, fast, and communicated at the right time to the right recipients. However, fast communication is not always effective, the reason being that when information is delivered fast, some of the context may get lost, ultimately affecting the usefulness of the communication. Therefore, to achieve effective communication, this paper argues that the context of communicated information is of high importance for all stakeholders.

It has been identified in this paper as well as in some literature, that the context of communication can affect the perception information but not only is context important but the method as well. Therefore, it has been found that the choice of method can have an impact on the effectiveness of communication. It is of high importance that the context matches the method, this because if not using the right method, some information may be lost and it has been established in the paper, that this may affect the outcome of the ERP implementation project. This finding is agreed upon by (Aubert et al., 2013; Maditinos et al., 2012; Wu & Cao, 2010). It is presented that the quality of the information shared is a critical success factor. Compared to previous studies, this paper identifies what effective communication is and how it effects a project. Through this paper readers are offered an insight into what effective communication is and how it is achieved.

This paper has identified that implementing consultants are of different opinions in relation to whether method of communication or content of communication is the most important. Once again, this is something that is dependent on both the preferences of the communicator and the communication recipients. While this finding is not highly debated in previous literature, this paper argues that effective communication is the foundation of implementation projects by ensuring qualitative participation from the beginning, which increases the likelihood that communication from all stakeholders is improved all through the duration of the implementation. As (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007) mentions, effective communication is challenging and demands an active effort from all parties involved. As mentioned in the literature (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007) in the literature, effective communication is challenging and demands an active effort from all parties involved in the project. The paper found that when implementing consultants communicate in an effective way such as by leveraging the correct communication method and knowing when and what information to share to which individual, then effective communication is achieved. In support of the findings in this paper regarding how effective communication ensures a successful ERP implementation project, (A. N. Parr et al., 1999) states that effective communication is a major factor for a successful implementation. The research of this paper shows that satisfaction for the customer as well as the consultant is additionally a critical aspect reached through effective communication.

(Maditinos et al., 2012) states that with trust, both parties can sustain a smoother and more effective communication, ensuring a better understanding of each other which in terms ensures a good relationship which is sought after. The research paper has identified what actions an implementing consultant should actively take to ensure an effective communication. It is of high importance for them to have, as previously stated, an open-ended communication which is honest. The paper identifies that having trust builds a stronger relationship between stakeholders and customer, further securing a customer's loyalty as well as creating a space for the consultant to speak more freely and openly about their wants and need for the project. This paper showcases what effective communication can do for an ERP project and how effective communication can ease the path to a successful ERP implementation.

The second of aim of this paper was to identify the main challenges as perceived by implementing consultants, and how communication can aid in overcoming these. To begin with, the importance of participation and effort from all stakeholders in communication permeates every challenge. One of the most important challenges identified is the setting, management, and realization of expectations. This challenge has been identified in previous research (Bradford & Florin, 2003; Cosmos Xulu & Suknunan, 2020; Maditinos et al., 2012; Obwegeser et al., 2019), and this paper further strengthen the importance of this aspect. This paper extends existing research by showing the importance of communicating clearly about all aspects that might affect implementation from the very beginning. Additionally, the data shows that customers are not always aware of their business needs and should be guided by the implementing consultant to carefully examine the requirements and specifics of the organization. Also, continued communication allows for implementing consultants and customers to create a symbiotic relationship in which long-term expectations can be met to the benefit of both parties.

An equally important challenge identified is achieving user acceptance. This finding is consistent with prior studies (Barker & Frolick, 2003; Bueno & Salmeron, 2008; Madhavi Latha & Kumar, 2016; Mendel, 1999; Nah et al., 2007). Once again, this challenge calls for the involvement of all stakeholders to overcome, especially end users. In accordance with the previously mentioned challenge, this paper argues that early communication to justify change must involve all stakeholders to avoid resistance to change and potential distress among employees of the adopting organization. These findings replicate and strengthen the conclusion of prior studies by Dezdar and Sulaiman (2011). This study adds to the existing body of research by showing how organizations unwillingness and or inability to dedicate resources and personnel, more specifically end users, to implementations might hamper and inhibit project success. Implementing consultants need to emphasize the importance of the customers participation and dedication of resources and thoroughly communicate this to the customer. Moreover, this paper shows us how communication can aid in overcoming the challenge of user acceptance by bridging the gap in knowledge between consultant and user through user training.

Conflict is an ever-present threat to implementations, commonly associated with unsuccessful implementations (Maditinos et al., 2012). Prior studies have discussed a link between communication and conflict resolution (Ha & Ahn, 2014; Wang & Chen, 2006), but this paper offers an alternative look at communication as a stand-alone factor, and not a feature of conflict resolution. Furthermore, previous studies have theorized a possible correlation

between conflict resolution and effective communication (Wang & Chen, 2006), but failed to prove a link. This paper builds on existing research by claiming that not only is conflict resolution a feature of effective communication, but effective communication is the most important factor to both avoid and solve conflicts. While previous research positions communication as a possible solution to the main problem, which they believe to be conflict resolution, this paper argues that conflict and conflict resolution is a mere symptom of poor communication. We argue that communication is the alpha-and-omega of conflict resolution. A theme can also be observed between the identified challenges, as conflict, expectations and user acceptance are all dependent on continual and thorough communication and the proper dedication of all involved stakeholders. Furthermore, this paper highlight and contribute to existing research by proposing the use of documentation such as e-mails, meeting notes and similar communication documentation as a technique for resolving conflict. Another interesting finding which was not found in previous research, was an alternative view of conflict as not only an implementation success obstacle, but also as a necessary evil to reach even more favorable project outcomes. We suggest that positive conflict is possible when stakeholders share the same overarching project goal, despite possible differences. This paper challenges the view of conflict as a hinderance and attempts to nuance our view and understanding of conflict.

One of the two last main challenges identified are a lack of personal chemistry, which is not present in the existing body of research on ERP implementations. It is defined as two communication participants not getting along, despite communication skills present on both ends. While this phenomenon is not present in the ERP literature, we link it to rapport (Tomasi et al., 2015), which is considered important for successful overall business project performance.

The last challenge identified is unclear project roles, which concerns the division of responsibilities. Similar findings are present in previous research (Amoako-Gyampah & Salam, 2004; Amoako-Gyampah, 2004; Dezdar & Ainin, 2011). This paper suggest that all participants are responsible for the project and project communication. Additionally, unclear project roles are linked to interdepartmental communication (Allen, 2008; Ha & Ahn, 2014; Somers & Nelson, 2004; Worrell, 2008; Wu & Cao, 2010), where we suggest that clear project roles are needed for interdepartmental communication to properly function.

## **6.1 Suggestions for future research**

For future research, there are several potential directions to wander. The topic of conflict and conflict resolution can certainly be explored further, since this paper suggest there are some different opinions on conflict, especially in relation to communication. Additionally, this paper suggests conflict is not simply negative. Perhaps future research could look at conflict as an enabler of success and not a symptom of failure or poor communication. Another unexpected finding of this paper was the potential problem that might arise when project participants lack personal chemistry. Earlier research on ERP does not mention this potential issue, and while some similarities can be drawn to rapport, there is little research on this specific matter. Future research could attempt to better define what it means, and what it stems from. Also, future studies could look at communication in ERP implementations from a

broader view, incorporating several stakeholders, not only consultants. This could lead to exiting research results where the different opinions of stakeholders could be better understood.

## References

- Abdelghaffar, H. (2012). Success factors for ERP implementation in large organizations: the case of Egypt. *The Electronic Journal of Information Systems in Developing Countries*, 52(1), 1-13.
- Akkermans, H., & van Helden, K. (2002). Vicious and virtuous cycles in ERP implementation: a case study of interrelations between critical success factors. *European Journal of Information Systems*, 11(1), 35-46. doi:10.1057/palgrave.ejis.3000418
- Allen, L. E. (2008). Where good ERP implementations go bad: a case for continuity. *Business Process Management Journal*, 14(3), 327-337. doi:10.1108/14637150810876661
- Amoako-Gyampah, K., & Salam, A. F. (2004). An extension of the technology acceptance model in an ERP implementation environment. *Information & Management*, 41(6), 731-745. doi:<https://doi.org/10.1016/j.im.2003.08.010>
- Amoako-Gyampah, K. (2004). ERP implementation factors. *Business Process Management Journal*, 10(2), 171-183. doi:10.1108/14637150410530244
- Aubert, B., Hooper, V., & Schnepel, A. (2013). Revisiting the role of communication quality in ERP project success. *American Journal of Business*, 28, 64-85. doi:10.1108/19355181311314770
- Avvaru, V. S., Bruno, G., Chiabert, P., & Traini, E. (2020, 2020/). *Integration of PLM, MES and ERP Systems to Optimize the Engineering, Production and Business*. Paper presented at the Product Lifecycle Management Enabling Smart X, Cham.
- Barker, T., & Frolick, M. N. (2003). Erp Implementation Failure: A Case Study. *Information Systems Management*, 20(4), 43-49. doi:10.1201/1078/43647.20.4.20030901/77292.7
- Bell, J. (2016). *Introduktion till forsknings metodik*: Studentlitteratur AB.
- Boonstra, A., & Govers, M. (2009). Understanding ERP System Implementation in a Hospital by Analysing Stakeholders. *New Technology, Work and Employment*, 24, 177-193. doi:10.1111/j.1468-005X.2009.00227.x
- Bradford, M., & Florin, J. (2003). Examining the role of innovation diffusion factors on the implementation success of enterprise resource planning systems. *International Journal of Accounting Information Systems*, 4(3), 205-225. doi:[https://doi.org/10.1016/S1467-0895\(03\)00026-5](https://doi.org/10.1016/S1467-0895(03)00026-5)
- Bueno, S., & Salmeron, J. L. (2008). TAM-based success modeling in ERP. *Interacting with Computers*, 20(6), 515-523. doi:<https://doi.org/10.1016/j.intcom.2008.08.003>
- Cosmos Xulu, V., & Suknunan, S. (2020). Enterprise Resource Planning (ERP) systems success: impact of employees' perceptions and satisfaction on expected benefits in a manufacturing setting. *Problems and perspectives in management*, 18(2), 466-475. doi:10.21511/ppm.18(2).2020.38
- Davenport, T. H. (1998). Putting the enterprise into the enterprise system. *Harvard Bus. Rev.*, 76(4), 121-131.
- Deloitte. (2021). *Your guide to a successful ERP journey: Top 10 change management challenges for Enterprise Resource Planning implementations*. Retrieved from [https://www2.deloitte.com/content/dam/Deloitte/mx/Documents/human-capital/01\\_ERP\\_Top10\\_Challenges.pdf](https://www2.deloitte.com/content/dam/Deloitte/mx/Documents/human-capital/01_ERP_Top10_Challenges.pdf)
- Dezdar, S., & Ainin, S. (2011). Examining ERP implementation success from a project environment perspective. *Business Process Management Journal*, 17(6), 919-939. doi:10.1108/14637151111182693

- Dezdar, S., & Sulaiman, A. (2011). The influence of organizational factors on successful ERP implementation. *Management Decision*, 49, 911-926.  
doi:10.1108/00251741111143603
- Finney, S. (2011). Stakeholder perspective on internal marketing communication: An ERP implementation case study. *Business Process Management Journal*, 17, 311-331.  
doi:10.1108/14637151111122365
- Fruhlinger, J., Wailgum, T., & Sayer, P. (2020). 16 famous ERP disasters, dustups and disappointments. *CIO*. Retrieved from  
<https://www.cio.com/article/2429865/enterprise-resource-planning-10-famous-erp-disasters-dustups-and-disappointments.html>
- Gargeya, V., & Brady, C. (2005). Success and Failure Factors of Adopting SAP in ERP System Installation. *Business Process Management Journal*, 11, 501-516.  
doi:10.1108/14637150510619858
- Ha, Y. M., & Ahn, H. J. (2014). Factors affecting the performance of Enterprise Resource Planning (ERP) systems in the post-implementation stage. *Behaviour & Information Technology*, 33(10), 1065-1081. doi:10.1080/0144929X.2013.799229
- Hasan, M., Trinh, N., Chan, F., Chan, H., & Chung, S.-H. (2011). Implementation of ERP of the Australian manufacturing companies. *Industrial Management & Data Systems*, 111, 132-145. doi:10.1108/02635571111099767
- Johansson, B., & Newman, M. (2010). Competitive advantage in the ERP system's value-chain and its influence on future development. *Enterprise Information Systems*, 4(1), 79-93. doi:10.1080/17517570903040196
- Kydd, C. T. (1989). Understanding the information content in MIS management tools. *MIS Quarterly: Management Information Systems*, 13(3), 277-290.
- Lederer Antonucci, Y., & Goeke, R. J. (2011). Identification of appropriate responsibilities and positions for business process management success. *Business Process Management Journal*, 17(1), 127-146. doi:10.1108/14637151111105616
- Light, B., & Wagner, E. (2006). Integration in ERP environments: rhetoric, realities and organisational possibilities. *New technology, work, and employment*, 21(3), 215-228. doi:10.1111/j.1468-005X.2006.00176.x
- Madhavi Latha, N., & Kumar, A. (2016). Centralization and the success of ERP implementation. *Journal of Enterprise Information Management*, 29(5), 728-750.  
doi:<http://dx.doi.org/10.1108/JEIM-07-2015-0058>
- Maditinos, D., Chatzoudes, D., & Tsairidis, C. (2012). Factors affecting ERP system implementation effectiveness. *Journal of Enterprise Information Management*, 25(1), 60-78. doi:<http://dx.doi.org/10.1108/17410391211192161>
- Mayeh, M., Ramayah, T., & Mishra, A. (2016). The role of absorptive capacity, communication and trust in ERP adoption. *Journal of Systems and Software*, 119, 58-69. doi:<https://doi.org/10.1016/j.jss.2016.05.025>
- Mendel, B. (1999). Overcoming ERP project hurdles : Experts offer tips on avoiding 10 problems that plague many ERP implementation projects.(Industry Trend or Event). *InfoWorld*, 21(29), 87.
- Meulen, R. v. d. (2020). *Understand the 4th Era of ERP*. Retrieved from  
<https://www.gartner.com/smarterwithgartner/understand-the-4th-era-of-erp/>
- Mitakos, T., Almaliotis, I., & Demerouti, A. (2010). An Auditing Approach for ERP Systems Examining Human Factors that Influence ERP User Satisfaction. *Informatica Economica*, 14(1), 78-92. Retrieved from  
<http://costello.pub.hb.se/login?url=https://www.proquest.com/scholarly-journals/auditing-approach-erp-systems-examining-human/docview/1433237690/se-2?accountid=9670>

- Nah, F. F.-H., Islam, Z., & Tan, M. (2007). Empirical Assessment of Factors Influencing Success of Enterprise Resource Planning Implementations. *Journal of Database Management*, 18(4), 26-50. doi:<http://dx.doi.org/10.4018/jdm.2007100102>
- Ngai, E. W. T., Law, C. C. H., & Wat, F. K. T. (2008). Examining the critical success factors in the adoption of enterprise resource planning. *Computers in Industry*, 59(6), 548-564. doi:<https://doi.org/10.1016/j.compind.2007.12.001>
- Obwegeser, N., Danielsen, P., Hansen, K. S., Helt, M. A., & Nielsen, L. H. (2019). Selection and training of super-users for ERP implementation projects. *Journal of Information Technology Case and Application Research*, 21(2), 74-89. doi:10.1080/15228053.2019.1631606
- Panorama. (2020). *The 2020 ERP Report*. Retrieved from <https://cdn2.hubspot.net/hubfs/4439340/Panorama-Consulting-Group-The-2020-ERP-Report.pdf>
- Parr, A. N., Shanks, G., & Darke, P. (1999). Identification of Necessary Factors for Successful Implementation of ERP Systems. In O. Ngwenyama, L. D. Introna, M. D. Myers, & J. I. DeGross (Eds.), *New Information Technologies in Organizational Processes: Field Studies and Theoretical Reflections on the Future of Work* (pp. 99-119). Boston, MA: Springer US.
- Parr, A. N., Shanks, G. G., & Darke, P. (1999). *Identification of Necessary Factors for Successful Implementation of ERP Systems*. Paper presented at the Proceedings of the IFIP TC8 WG8.2 International Working Conference on New Information Technologies in Organizational Processes: Field Studies and Theoretical Reflections on the Future of Work.
- Popp, D., Klewes, J., & Rost-Hein, M. (2016). *Outthinking Organisational Communications: The Impact of Digital Transformation*: Springer.
- Recker, J. (2012). *Scientific research in information systems: a beginner's guide*: Springer Science & Business Media.
- Recker, J. (2013). *Scientific research in information systems : a beginner's guide*: Berlin ; New York : Springer.
- Reitsma, E., & Hilletofth, P. (2018). Critical success factors for ERP system implementation: a user perspective. *European business review*, 30(3), 285-310. doi:10.1108/EBR-04-2017-0075
- Robert Jacobs, F., & 'Ted' Weston, F. C. (2007). Enterprise resource planning (ERP)—A brief history. *Journal of Operations Management*, 25(2), 357-363. doi:<https://doi.org/10.1016/j.jom.2006.11.005>
- Rollender, N. (2021). Staying the Course to E-Commerce. *Impressions*, 45(1), 14-18. Retrieved from <http://costello.pub.hb.se/login?url=https://www.proquest.com/trade-journals/staying-course-e-commerce/docview/2518779346/se-2?accountid=9670>
- Scott, J. (1999). *The FoxMeyer Drugs' Bankruptcy: Was it a Failure of ERP?*
- Somers, T. M., & Nelson, K. G. (2004). A taxonomy of players and activities across the ERP project life cycle. *Information & Management*, 41(3), 257-278. doi:[https://doi.org/10.1016/S0378-7206\(03\)00023-5](https://doi.org/10.1016/S0378-7206(03)00023-5)
- Tomasi, S., Parolia, N., Han, C., & Porterfield, T. (2015). Exploring the impact of team rapport and empowerment on information processing and project performance in outsourced system development. *International Journal of Project Organisation and Management*, 7, 284. doi:10.1504/IJPOM.2015.070794
- Tota, S., Govindaraju, R., & Amaranti, R. (2016). Change Management Perspectives in an ERP Module Implementation: A Case Study in a Telecommunication Company. *Jurnal Teknik Industri*, 18(1), 51-62. doi:<http://dx.doi.org/10.9744/jti.18.1.51-62>

- Umble, E. J., Haft, R. R., & Umble, M. M. (2003). Enterprise resource planning: Implementation procedures and critical success factors. *European Journal of Operational Research*, 146(2), 241-257. doi:[https://doi.org/10.1016/S0377-2217\(02\)00547-7](https://doi.org/10.1016/S0377-2217(02)00547-7)
- Wang, E. T. G., & Chen, J. H. F. (2006). Effects of internal support and consultant quality on the consulting process and ERP system quality. *Decision Support Systems*, 42(2), 1029-1041. doi:<https://doi.org/10.1016/j.dss.2005.08.005>
- Worrell, J. L. (2008). *Running the ERP marathon: Enhancing ERP-business fit in the post-implementation phase*. (Ph.D.). The Florida State University, Ann Arbor. Retrieved from <https://www.proquest.com/dissertations-theses/running-erp-marathon-enhancing-business-fit-post/docview/250806956/se-2?accountid=11162>
- ProQuest Dissertations & Theses Global database. (3340774)
- Wu, H., & Cao, L. (2010). Community Collaboration for ERP Implementation. *Software, IEEE*, 26, 48-55. doi:10.1109/MS.2009.171
- Zhang, Y., & Xu, Y. (2009, 25-27 Dec. 2009). *Evaluation Indicator System and Weights Research of Communication Effects in ERP Implementation Project*. Paper presented at the 2009 International Forum on Computer Science-Technology and Applications.

## Appendix 1

	Gender	Company	Roll	Years of experience	Interview duration
Respondent 1	Male	Exsitec	Application consultant/ ERP consultant	4	60 minutes
Respondent 2	Female	Exsitec	Team leader/ ERP consultant	8	1 hour 10 minutes
Respondent 3	Male	Exsitec	Project Leader	2,5	60 minutes
Respondent 4	Male	SuiteSpot	ERP consultant/ supply chain management	1	55 minutes
Respondent 5	Male	Nexer group	Sales director	2	60 minutes
Respondent 6	Male	ZeeU	Senior consultant	3	Written answers
Respondent 7	Male	Monitor	Support, economic support, consult, chef consultant	9	55 minutes
Respondent 8	Male	ERP & Friends	Project management- assistant	2	55 minutes

## Appendix 2

### Intervjumall

#### Inledning

- Berätta om studien och vad den ämnar uppnå.
- Fråga om det är okej att intervjun spelas in.
- Förklara för respondenten att han/hon kommer att vara anonym och att svaren/transkriberingen kommer att hanteras konfidentiellt och att det endast är vi som kommer att se eller använda materialet.

#### Generell information

- Vad heter du?
- Hur länge har ni arbetat på företaget?
- Vad är er roll/jobbtitel?

#### Intervjufrågor, huvuddel

1. Vad innebär effektiv kommunikation för dig?
2. På vilket sätt kan effektiv kommunikation förbättra implementations processen av ERP system?
3. Vad är i din erfarenhet den vanligaste anledningen att ERP implementationer misslyckas, eller anses vara misslyckade?
4. Vilken är den vanligaste anledningen till att kommunikationsproblem uppstår, och hur påverkar dessa "problem" implementationen?
5. Är kommunikation inom ERP implementationer krävande, och hur manifesterar det sig i så fall?
6. I forskningen råder det delade meningar om huruvida konfliktlösning eller kommunikation är viktigast för framgångsrika ERP implementationer, vad anser du?
7. Kommunikation anses ofta vara väldigt viktigt för framgångsrika ERP implementationer, men stämmer detta eller är kommunikationens inverkan överskattad?
8. Vilka är de vanligaste utmaningarna du stöter på i implementationer av ERP?
9. Efter implementation, har du varit i kontakt med kund igen, och vilken roll spelar fortsatt kommunikation med kund?
10. Hur påverkas kommunikationen, och i slutändan implementationsframgång, av det faktum

att företag är väldigt olika och kan ha olika företagskulturer, preferenser, processer eller mål?

11. Kommunikation åsido, vilka faktorer är viktigare än kommunikation för framgångsrika ERP implementationer enligt dig?

12. Är det rimligt/praktiskt genomförbart att alltid ha ett fokus på kommunikation, eller kommer andra saker ofta i vägen? 13. Påverkas kommunikationens roll vid en ERP implementation av exempelvis storlek på

kundföretaget, det vill säga, förekommer det väsentliga skillnader på kommunikationen mellan stora kunder i kontrast till mindre kunder?

14. I din erfarenhet, vad är viktigast: hur information kommuniceras eller innehållet i det som kommuniceras?

15. Vilken är den absolut viktigaste rollen kommunikation fyller vid en ERP implementation?

16. Upplever du att kommunikation inom ERP projekt ibland är oärlig, och i så fall varför?

17. Har du upplevt kommunikationssvårigheter, exempelvis mellan dig och kund/team/chefer inom implementationer?

18. Hur påverkar kommunikation användaracceptans av ERP system?

19. Vad gör ni för att säkerställa att kunders användare "accepterar" förändringarna av implementationen?

20. Vilka inom företaget/processen är ansvarig för och kontrollerar kommunikationen?

Ledarskap

1. Hur ofta kommunicerar du med de anställda om implementationsprocessen, och är detta tillräckligt?

2. Är den kommunikationen du ger ut angående ERP implementationen tillräcklig?

3. Hur mycket tid spenderas på att lära ut ERP system, och är detta tillräckligt?