CHALMERS
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Intra-Organisational Communication Problems

Contributing Factors and Recommendations for Improvements

Master's Thesis in the Master's Programme
Quality & Operations Management

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Abstract

To understand communication problems that can occur internally at manufacturing companies, a single case was studied. In this case study a manufacturing company which has internal communication problems was investigated. Therefore, in this case study is carried out to find the causes for this internal communication problem. A closer investigation to find out what the underlying factors causing communication problems between departments was conducted. For triangulation of the data gathered, three data collection methods were used; questionnaire, interviews and workshops. Furthermore, in the case study suggestions for improvements are brought forth that could be implemented to enhance the intra-organisational communication in manufacturing companies. The suggested improvements concern subjects such as meetings, email communication and cooperation.

Acknowledgements

I would like to thank my brothers for their support and for being cornerstones in my life. To my mother and father, thank you for your support and guidance through life and the sacrifices you have made to make this possible. Also, thank you for giving me the tools to strive for the better and always pushing the limits of my capabilities and dreams. I am forever grateful and thankfully to you.

/Hejwa Kader

I would like to thank my brothers for their support and encouragement to always push the limit of my abilities. Last but not least, I would like to thank my father and mother for their support and for the sacrifices they have made to make it possible for me to do better and achieve my goals. For that I am eternally thankful. Moreover, I would like to thank my parents for the help with proofreading the thesis and for helping out with the kids in times needed. Last but not least, I would like to thank my fiancé, Sunna, for her support.

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Contents

1 Introduction

The automotive industry is constantly changing and striving to deliver new innovative ideas to the market, bringing exclusivity to their brand. The ever-increasing pressure from governments and the public regarding the environmental effects of an automotive makes it inevitable for the industry to scope their projects around decreasing the environmental effect. Technological development has made scenarios that once seemed out in the horizon and improbable, a reality. While organisations deal with this wave of new development, they must concurrently deliver sustainable growth and positive result in a market that is more competitive than before. Add to this the pursuit of good quality, which is in the forefront of today's competitive environment and alongside those quality improvements is the struggle of constantly reducing cost to improve return on investment for stakeholders.

This pursuit of lowering the environmental effect and increasing quality is pushed onto the suppliers as well where the supplier relationships have changed into partnerships. Partnerships where the supplier and the automotive maker work together towards creating the best possible quality at the lowest cost (Bergman and Klefsjö, 2010). An example of that is the Toyota keiretsu system where the automotive maker and the supplier bond in strong relationships that depend on each other with financial results, and where decision making regarding the product development is through dialogue (Liker and Choi, 2004).

Lean, Six Sigma, Total Quality Management, Kaizen and many other buzzwords seem to be in the top of managements minds. The management probably thinks "This is what will change the turnover of the organisation!". But is it so? During this pursuit of ever-increasing quality and lowering the cost per item produced, an important aspect which is often forgotten is communication. The word communication seems to be a word describing a dialogue between two individuals. According to Clegg, Kornberger and Pitsis (2016) there are three different ways communication can be carried out, namely verbally, non-verbally and visually. It is further explained that it can be carried out through emails, telephones, the internet or face-to-face communication. Communication is used to understand what suppliers; colleagues and the customers require. Communication is the way through which you tell your suppliers that you want a delivery of an item, it is the way through which customers lets you know that they want, or it is the way which a colleague notifies you that there is a meeting in 20 minutes. Organisations uses communication both to connect with the public and with the employees inside the organisation (Clegg et all, 2016). In this master's thesis the authors will investigate the latter, which will be referred to as intra-organisational communication.

In this thesis, intra-organisational communication is defined as communication between individuals in different departments, as well as, in the same department and the different levels within the organisation. Where communication is the process by which a person, group, or organisation transmits some type of information to another person, group or organisation (Greenberg and Baron, 2008). This definition demonstrates that communication is connecting all individuals and departments together. Supporting Clegg et al (2016) notion that communication between individuals and groups on the overall organisational level is what binds all of this together so that the organisation moves towards their goals (Clegg et al, 2016).

To meet customer requirements, intra-organisational communication must work well (Bergman & Klefsjö, 2010). This means that to meet customer requirements, communications between all departments within the organisation needs to be up to date, it needs to be delivered as soon as possible and the information in the communication also needs to be brief and valid. For communication to be useful for the receiver, the information in it needs to be precise, complete, understandable and with all facts presented (Rogala and Bialowas, 2016). However, in today's environment of rapid and constant changes in organisations, effective and efficient intra-organisational communication is not always working as organisations wants it to. Many organisations have problems with adapting intra-organisational communication accordingly to the environment they are working in. To understand the causes behind intra-organisational communication problems between departments, the authors of this paper have investigated a manufacturing organisation (Wheelwright and Clark, 1992; Rogala and Bialowas, 2016).

1.1 Purpose and Research Questions

The purpose of this master thesis is to investigate communication between departments within manufacturing organisations. For manufacturing organisations, it is imperative that there exists a constant communication between departments inside the organisation (Eunson, 2012; Bergman and Klefsjö, 2010). However, this is not a simple task to achieve. Many organisations have difficulties in creating a well-balanced communication between departments (Wheelwright and Clark, 1992). Wheelwright and Clark (1992) mentioned that organisations must find a way to create an environment where communication can work efficiently and effectively in order to deliver according to requirements. In their book *Revolutionizing product development: Quantum leaps in speed, efficiency and quality,* Wheelwright and Clark put forward different approaches enabling better cross-departmental communication and cooperation. However, in order to find a successful way for communication between departments, Wheelwright and Clark (1992) mentions that there must be a consensus and awareness of what the underlying problems causing difficulties in communication and cooperation between departments are. Therefore, understanding the current situation is paramount for future success. This leads up to the first research question.

1. What are the underlying factors causing intra-organisational communication problems between departments in manufacturing organisations?

This first research question will be scrutinized in workshops, interviews and through a questionnaire. The information and data gathered will give the authors of the master thesis a broader perspective of the different factors that are causing communication problems. Additionally, it will help the authors to put forward recommendations on how to improve the communication problems at hand. This lead up to the second research question.

2. What recommendations can be made for improvements of intra-organisational communication at manufacturing organisations?

1.2 A manufacturing organisation

To be able to generalise the findings and understanding what underlying factors might cause communication problems in manufacturing organisations, this master thesis will investigate a manufacturing organisation in the Gothenburg area in Sweden. The manufacturing organisation is a global supplier for the automotive industry with more than 230 manufacturing facilities and assembly plants across Asia, Europe, and USA. The organisation manufacturers seat structures, seat mechanisms, fabrics, foam, and trim to produce complete seats that meet local regulations and requirements. The organisation strives to stay innovative in product design and is constantly developing their materials, making products thinner and lighter without sacrificing quality and strength. Sustainability is in the forefront and that is why they strive for continuous innovation with the aim of helping their customers succeed in making more compact, lighter, and more eco-friendly seating options.

One manufacturing facility of the organisation is in Torslanda, this manufacturing facility is one of many Just-In-Time facilities of the global organisation. It is thus strategically located close to their local customer enabling the manufacturing facility to provide the customer with complete seating units, that is front and back seats that are ready for in-car installation. Every seating unit is made-to-order and has individual customised options coming from the end-customer. These individual options can be e.g. different kind of material, different kind of colour, massage in the seat, heating in the seat, electrical seat, or manual seat. This high customizability makes the manufacturing facility one of the most complex manufacturing sites of the global organisation.

1.3 Problem description

Problems with intra-organisational communication has been a topic that many researchers (Wheelwright and Clark, 1992) have found interesting. If the intra-organisational communication is not good it can affect the overall organisational efficiency and effectiveness (Rogala and Bialowas, 2016; Eunson, 2012; Bergman and Klefsjö, 2010). Additionally, poor intra-organisational communication can lead to financial problems for the organisation (Bergman and Klefsjö, 2010: Wheelwright and Clark, 1992). There are many ways to communicate and thus there are many ways to fail to communicate correctly. Those ways of communication are many when discussing intra-organisational communication and therefore it is important for all organisations to consider the ways they communicate.

A common and occurring problem in the manufacturing organisation studied in this thesis, is communication. The perception among employees in the manufacturing organisation is that communication problems are leading to inefficient and ineffective problem solving and project closure. Additionally, there have been indications of insufficient and ineffective that the communication problems lays between different departments, e.g. one department is not made aware when another department uses or scraps materials. This lack of communication can lead to information not being provided at correct time or not in enough detail. When the information provided does not have enough detail the receiver of the information will have a hard time reacting to the information given, thus leading to difficulties in communication. Bergman and Klefsjö (2010) and Nadler and Tushman (1997) state that problems with cooperation can result in poor morale amongst employees, which in turn decreases the likelihood of producing products with the required quality level and at the time requested by the customers.

Due to the Just-in-Time relationship with their customers, the communication inside the organisation must work well. This means, enabling information to be delivered to the right personnel at the right time. A clear example of that this is not working at the manufacturing organisation in this thesis, was brought forward by an employee, commenting, that a material planner had not been given the correct information regarding scrapped materials. Which resulted in shortages of materials and stoppage on the production floor. A situation like this usually has a domino effect, thus affecting other operations, e.g. there will be a need for logistical solutions which will be more expensive and less sustainable, there will be rush orders made to the suppliers, this is also more expensive and at its worst it can cause the customer's production to stop. Although, these problems are occurring and have been doing so for years, it is not known if they are due to cultural behaviour of the employees, insufficient knowledge, insufficient systems knowledge, inadequate training, missing process maps, or due to inadequate channelling of information.

2 Theoretical Framework

In this chapter the theoretical background that was used for this thesis will be presented. The subject of communication will be discussed, mainly intra-organisational communication since it is the topic of interest to answer the research questions posed in chapter 1. Further, the topic of cooperation will be covered, since the authors believe it can affect intra-organisational communication.

2.1 Communication

Communication is used everywhere and every day. It is used at home, in school and within organisations. Clegg et al (2016) bring forward three different ways communication can be carried out, namely verbally, non-verbally and visually. They further explain that it can be carried out through email, telephone, the internet or face-to-face communication. In a manufacturing organisation there are many processes that are operating simultaneously and must be controlled and managed to function well. Further, in a manufacturing organisation there are many types of communication that are carried out on daily basis, e.g. decision making among employees, external communication concerning customers and consumers, and communication with stakeholders. Therefore, communication plays a very important and central role in daily activities and must be a focus within manufacturing organisations (Littlejohn, 1989; Littlejohn and Foss, 2010).

Organisations unable to create a good environment for communication are likely to meet difficulties in conducting daily activities (Littlejohn, 1989). Examples of ways of communication are body language, speech, actions, signs, writings or signals (Rogala and Bialowas, 2016; Clegg et al, 2016; Stevanovic and Gmitrović 2015). For the organisation to reach objectives, there is a need for effective communication between departments, as well between individuals within each department and individuals communicating with other departments (Rogala and Bialowas, 2016).

For the individual within the organisation to work efficiently the information also needs to be communicated efficiently. The information communicated needs to be up to date, it needs to be delivered as soon as possible and the information also needs to be brief and valid. For this information to be useful for the receiver, the information needs to be precise, complete, understandable and with all facts presented (Rogala and Bialowas, 2016). Nadler and Tushman (1997) discuss that in stressful situations, the receiver of the information can completely misunderstand the information given or even not receive it at all due to the anxiety level, which gives more ground for the information to be simple and understandable for the receiver.

In the following sub-chapter, this thesis will look into the process of interpersonal communication, which is the communication between two or more individuals.

2.1.1 Interpersonal Communication

The concept of interpersonal communication is very straightforward to most people, it is something we are doing every day in almost all our everyday activities. According to Clegg et al (2016) interpersonal communication involves face-to-face interactions between individuals. Eunson (2012) identifies interpersonal communication as a unique and selective process of message transaction, allowing the opportunity for improved individual knowledge and a stimulus for personal contact with others. Littlejohn and Foss (2010) identify the criteria for interpersonal communication as:

- When it is two or more people interacting with each other.
- It includes an interdependency between those communicating and interacting.
- It includes the exchange of information or message.
- The information or message exchanged is coded in a variety of ways verbally and non-verbally.

Figure 1 presents a simplified model demonstrating interpersonal communication, based on Shannon and Weaver model of communication (Shannon and Weaver, 1949). First, the sender has an information or idea he or she want to exchange. Second, the sender creates a message according to a certain code, which has its roots in the experience, age, gender or environment of the sender. Third, the sender selects the appropriate channel for distributing and communicating the information or messages created. Fourth, in this phase the recipient decodes the communicated information. The degree of decoding and understanding depends on the receiver's knowledge regarding the communicated subject. Fifth, the receiver has interpreted the information and come to an understanding based on his or her degree of knowledge. Lastly, the final step feedback ensures if the receiver has understood the information communicated by the sender correctly. This phase is paramount because an effective communication in organisations occurs only if the receiver has understood the information correctly or as it was intended be understood.

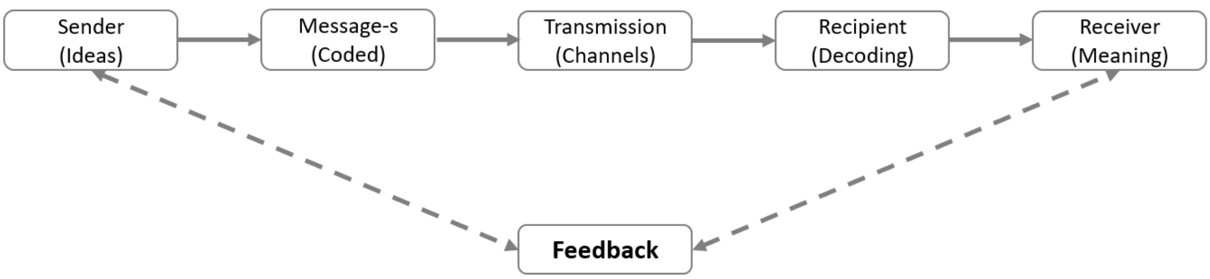

Figure 1, a simplified interpretation based on Shannon and Weaver model of communication. (Shannon and Weaver, 1949).

Interpersonal communication is an important aspect of intra-organisational communication. Inside organisation, interpersonal communication can take on two structures; Formal and Informal. In the following sub-chapter theses to structures are considered.

2.1.2 Formal and Informal Communication

Formal communication is communication that flows through the established hierarchy in the organisation and follows the rules and norms of the organisation. Littlejohn (1989), describes formal communication as being structured and goal oriented. Its strength of ensuring reliability through standardised communication is one of the benefits with formal communication (Eunson, 2012; Rogala and Bialowas, 2016). The way organisational structure is set-up plays an important role for formal communication. According to Simpson (1959) and Tubbs and Moss (1974) formal communication follows the chain of command established by the organisation. This is supported by Greenberg and Baron (2008) who further state that the formal communication is affected by the organisational structure through the formally set channels and patterns for interrelationship between employees and departments. Formal communication is also communication that is sent upwards form lower levels to top management through official channels (Littlejohn and Foss, 2010).

A newsletter which is distributed to employees every month including organisational information is a type of formal communication. It is used to communicate information in a systematic way which has a psychological stamp of authenticity and legitimacy (Littlejohn, 1989; Greenberg and Baron, 2008). Newsletters are typical for downward communication, which will be discussed later in this chapter. The same can be said about the reporting in organisations, subordinates write feedback reports, which travel through official channels upwards to top management, to be assessed and used for decision making. This is typical for upward communication which will be discussed later in this chapter. Other sort of formal communication is annual reports, manuals, training information (includes video) and more.

It is possible to distinguish certain advantages with formal communication. Firstly, the authority within the organisation is maintained (Hargie and Tourish, 2009). Secondly, as mentioned before the flow of communication is definite, it does not diverge from set rules and channels and it is systematically distributed through the organisation (Simpson, 1959). Thirdly, whereas secrecy is hard to maintain in informal communication, formal communication can be kept within its frames and secrecy is maintained (Greenberg and Baron, 2008). Lastly, the source of the information can be located, and past information communicated can be easily located since it has gone through official channels (Hargie and Tourish, 2009). However, there are some disadvantages that can be distinguished regarding formal communication. One disadvantage concerns the non-emotional or non-personal touch of the communication (Kreps, 1990).

The informal communication channel in organisations is the opposite to the abovementioned formal communication, in the sense that it does not follow organisation structure nor hierarchy. Greenberg and Baron (2008) state that informal communications are most often not work-related communication and therefore employees in different hierarchical positions dare to share information. This notion is supported by Littlejohn (1989) saying that when communication and information is not work-related, the informal communication tends to cross hierarchy levels much easier. The informal communication breaks away from the constraints of hierarchical structure and flows in the direction of the informal and social connections among employees inside the organisation where exchange of information is conducted.

Greenberg and Baron (2008) mention that informal communication is mostly conducted orally or as he puts it by word of mouth. However, several other authors call it the grapevine (Crampton, Hodge and Mishra, 1998). This means that communication and information is distributed through social relationships, e.g. acquaintances or friendships, inside the organisation. Crampton, Hodge and Mishra (1998) and Stanley (2008), bring forth that communication and information spreads through the grapevine without any verification by top management often is called or can be labelled as rumours.

Just like how the juice of a grapevine goes in all direction when it is smashed, the grapevine communication is spread rapidly and, in all direction, when it is presented. The grapevine or word of mouth communication play an essential role in all organisation, it breaks the formal structure in which the organisation is set-up, using informal communication (Knippen, 1974). The informal communication is a good way for employees to get things out of their chest and for emotional release on what has been bothering them. Thus, increasing the chances of top management hearing about it. The informal communication is a great tool for creating new social relationships and bonding between colleagues, it also works as a tool for improving effectivity and performance within the organisation (Eunson, 2012; Clegg et al, 2016). Previous literature regarding organisational strategy (Floyd and Wooldridge, 1992), organisational communication (Kreps, 1990), and organisational behaviour (Greenberg and Baron, 2008), has indicated that the socialisation created from informal communication is beneficial for providing opportunities satisfying the social needs of employees and for creating and ensuring a work environment that stimulates workers and improves the cohesiveness of teams and groups within organisations.

As mentioned by Stanley (2008) the grapevine is most prevalent in an organisation when communication is unclear regarding important issues and organisation. Additionally, Knippen (1974) brings forth that grapevine communication works as a default mode for employees when they are stressed, feel insecure, when communication with superior is poor or not working, during times of uncertainty and when they feel threatened. However, as stated by some authors (Littlejohn, 1989; Crampton, Hodge and Mishra, 1998; Stanley 2008; Eunson, 2012) grapevine or informal communication as mentioned above can sometimes create untrue communication and information, therefore it is of great importance for top management to work proactively to ensure that those kinds of communication are not in circulation. Such communication would create uncertainty and stress which affects all members of the organisation.

Moreover, informal communication is effective in reducing anxiety among employees and helps improving cooperation and coordination between departments, thus enhancing the efficiency of the organisation (Littlejohn and Foss, 2010; Greenberg and Baron, 2008). In addition, it helps creating an organisational culture and it can function as a problem identifying tool. Other advantages with informal communication are its speed and the fact that it is not constraint by definite channels, hence enabling a free environment for it to spread. The informal communication is also a good complement to the formal communication enabling communication otherwise hard to communicate through the formal channels, e.g. emotions, opinions and attitude about management, policies or the organisation in general (Eunson, 2012). On the other hand, the disadvantages with informal communication lays in; its unreliability, the high risk that important information is leaked, this could be both organisational information or personal information about other employees (Littlejohn and Foss, 2010). Lastly, informal communication does not come with responsibility, meaning that if facts are misleading the one responsible cannot be identified (Tubbs and Moss, 1974). Looking at these disadvantages and other mentioned above it is paramount that decision making is not made based on informal communication. This is brought up by Bergman and Klefsjö, (2010), stating that decisions must be made based on facts and not what someone believes or feels.

Continuing, this thesis will consider that different levels of communication is apparent in organisations. The following sections will touch upon the dyadic, group and intra-organisational communication.

2.4 Level of communication

A straightforward way of organising communication within organisations is through different levels of communication. Clegg et al (2016) present four different levels of communication namely Dyadic communication, Team/Group communication, Organisational communication and Mass communication. Below the former three will be brought forth, since it according to Clegg et al, (2016) concerns the internal communication of organisations, while mass communication concerns communication outside the organisational barriers.

2.4.1 Dyadic Communication

Dyadic communication refers to communication between two individuals. The dyadic communication is a two-sided communication, it can take an impersonal structure. This means when two individuals interacting without any sort of direct contact, this could be through phone or email (Clegg et al, 2016). Dyadic communication in organisation can be formal and informal, the former suggest that the communication is based on organisational issues, it could be a mid-manager talking about work related issues with his or her supervisor. The latter is related to communication between friends, family or communication not regarding organisational issues (Littlejohn, 1989; Clegg et al, 2016).

2.4.2 Group Communication

Small group communication concerns communication with more than two individuals and is an interpersonal communication. In group communication all members are both senders and receivers of information. Group communication can be characterised by its high degree of information sharing, thus increasing the chances of all member understanding discussed subject, thus achieving consensus among members (Kreps, 1990). Littlejohn (1989) found that the structure of group dynamics can affect group communication, this is as well brought to light by Eunson (2012) and Stevanovic and Gmitrović (2015) commenting that the structure of groups or teams have significant impact on the group's communicative skills. Moreover, Clegg et al, (2016) states that group communication commonly occurs in meetings, brainstorming sessions and workshops.

2.4.3 Intra-organisational Communication

Organisational communication refers to communication through the organisation, including the dyadic and small group communication presented by Clegg et al (2016). Moreover, communication within organisational communication covers all aspects dealing with operating the organisations (Littlejohn and Foss, 2010).

In organisations there is a constant exchange of ideas, messages, emotions, information and stories which play an integral part of the daily activities. Communications within organisations can be transported or distributed through email, phone calls and meetings (Clegg et al, 2016; Eunson, 2012; Rogala and Bialowas, 2016). Without communication among individuals an organisation cannot exist. Communication is what keeps the organisation together creating a bridge between departments and their activities. Clegg et al, (2016) writes that communication is what connects the organizational activities with together. Adler (1986) describes communication as dynamic and complex, and through which we exchange meanings. Further, Greenberg and Baron (2008), describe communication as a process where different types of information are transmitted from a sender at one point to a receiver at another. Further, Greenberg and Baron (2008) describe that the sender and receiver could be a person, group or organisation. As mentioned above, in the setting of an organisation, employees collect, send and interpret information that is relevant to them. This process is commonly referred to as organisational communication (Kreps, 1990; Clegg et al, 2016; Hargie and Tourish, 2009), intra organisational communication (Rogala and Bialowas, 2016;) or internal business communication (Stevanovic and Gmitrović , 2015).

Eunson (2012), Littlejohn (1989), Hargie and Tourish (2009), Rogala and Bialowas (2016), Greenberg and Baron (2008) have established that there is a connection between performance and communication in organisations. According to Hargie and Tourish (2009) it is vital for organisation to have or create effective communication. They state that well-structured communication enables information to be distributed and presented in a manner which achieves new levels of performance and satisfaction among employees.

2.5 Direction of communication

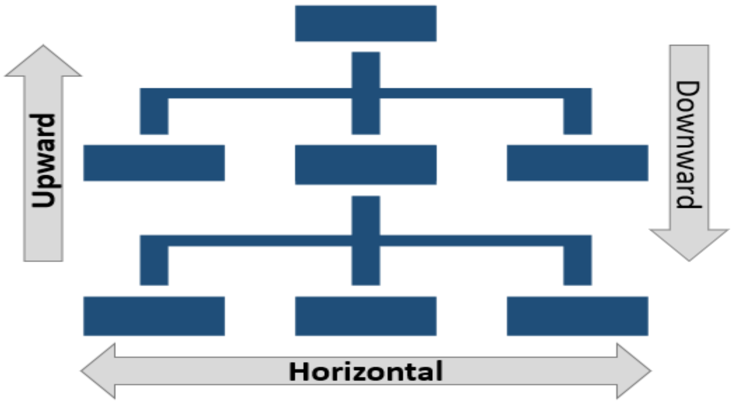

Figure 2, the different directions of communication inspired by Clegg et al, (2016).

These different exchanges of communication and the way they are presented, e.g. formal and informal, to its specific audience happens in different directions. In his book Clegg et al (2016) highlights three directions of communication; downward, upward and horizontal, see figure 2 for a visual presentation of the directions. According to other authors (Eunson, 2012; Littlejohn, 1989; Rogala and Bialowas, 2016) these three directions create the basis for which communication takes place inside an organisation.

2.5.1 Downward communication

Clegg et al (2016) states that downward communication has specific functions in organisations instructing employees on what to do, gives feedback of performance, tries to build commitment and motivation, provides goals to employees and explains how these goals can be achieved. The downward communication describes the direction from top management to mid-management to subordinates. From Stevanovic and Gmitrović (2015), Littlejohn and Foss, (2010) and Kreps, (1990) it is possible to identify five purposes of downward communication. The five purposes are:

1. Implementation of goals and strategies; this touches upon the question where is the organisation going, what is our objective?
2. Job instructions; which answers what does my job entail?
3. Procedures and practices; explains the different rule and policies in the organisation.
4. Socialisation; entails creating an environment where employees are motivated and cared about.
5. Performance feedback; describing employees and department performance.

Further Hargie and Tourish (2009) suggest that for downward communication to be effective top managers must communicate directly with supervisors and they in turn communicate with their staff. The downward communication resembles the top-down approach in organisation strategy, where decision making is controlled by top management and sent down to mid-management, who later distribute it to the levels below to be carried out.

According to Stevanovic and Gmitrović (2015) communication going from the top down often creates irritation among employees in the lower levels. To satisfy the needs of employees' regarding organisational communication there are certain criteria that must be fulfilled. It is of importance that employees receive necessary and precise information about their jobs, responsibilities and performance feedback (Greenberg and Baron, 2008). Moreover, Kreps (1990) put forward that to avoid confusion and dissatisfaction among employees it is vital that the reason for why decisions have been made are explained or presented. However, Rogala and Bialowas (2016), Hargie and Tourish (2009) and Kreps (1990) have found that organisation have a tendency in the downward communication to ignore any communication concerning why decisions are made, they explain that this is either because management believes it is not of importance and necessary for employees to know or that they are too occupied with other assignments, task or projects to do so. Although, previous studies suggest that clarifications of decision-making increase support for future decision making and job satisfaction among employees (Littlejohn and Foss, 2010; Greenberg and Baron, 2008; Bergman and Klefsjö, 2010; Hartley and Bruckham, 2002).

2.5.2 Upward communication

Upward communication describes flow of communication from the lower level of the organisation up to top management (Clegg et al, 2016). This is opposite to the previous mentioned downward communication, here the flow goes from subordinate to superiors. This type of communication includes feedback regarding performance, customer needs, strategies, supplier and product status. The upward communication is a vital part of the organisation's decision making, because it is most often employees that have close relations with suppliers and customers, knowledge about products and services. And it is information in this upward communication, from employees to top management that lays the ground for development and creation of organisational goals and objectives (Greenberg and Baron, 2008; Clegg et al, 2016).

A clear contrast of a well working communication in both direction and a bad one can be seen when comparing the Japanese car manufacturers with the American car manufacturers during most of the 20th century (Liker and Choi, 2004). In the former, employees are to a high degree involved in the organisation's improvement work regarding the different processes, where discussion is going back and forth between employees and top management (Liker and Choi, 2004). While in the latter, communication is one-way road, where decisions are made by the top executives and the employees must carry them out (Liker and Choi, 2004). The result favoured the Japanese car manufacturer who was a more dominant force in performance, job satisfaction and productivity during the 20th century (Liker and Choi, 2004).

However, several authors bring forward different aspects to improve and form a more effective upward communication. Keyton (2011) suggest that organisations should try an open-door policy, meaning that the door is always open for employees to go and talk to management about problems or suggestions for improvements. Bergman and Klefsjö (2010) and Stevanovic and Gmitrović (2015) states that management should take a walk around the organisation building, this will according to him signal openness and enable employees to initiate upward communication. Rogala and Bialowas (2016) which also add that upward communication can be improved through regular group discussion with management involved. In addition, Hargie and Tourish (2009) suggest that to create a well function upward communication, top management should share their perspective, feelings and difficulties to subordinates, creating an environment of trust and hopefully break the ice to enable greater upward communication.

The purpose of the improvement aspects is to decrease the fear among employees to report negative news. When an employee reports a problem that has occurred, the employee might be afraid of getting the blame and situation like this will in the long run create an environment where employees hide information during upward communication, which is the base for decision making in management (Miltenburg, 2009; Rogala and Bialowas, 2016). This will end up leading to a vicious down spiral, which has the potential to change results and impacting the organisation very negatively. Therefore, it is paramount to inform that all sort of information, good and bad is important and essential to how the organisation will perform (Miltenburg, 2009).

According to Floyd and Wooldridge (1992) it is a common trait among employees in lower levels of the organisation that they just agree with superiors when they are asked to give opinion. This can have it roots in uncertainty among employees, uncertainty regarding if their thoughts are truly taken into consideration or that they are incompetent. Kreps (1990) emphasises that communication which is restricted by uncertainty as very dangerous for organisations, because it can create a culture which dampers the upward communication. To avoid creation of these kind of environment, Kreps (1990) promotes open encouragement, meaning creation of open discussion in safe environments where communication can grow. Further Greenberg and Baron (2008) mention rewards for employees conducting upward communication as an incentive to enhance upward communication.

These two communication directions highlight communication occurring hierarchically in organisations and can also be vertical communication, emphasising that it goes up and down through the organisational hierarchy.

2.5.3 Horizontal communication

The direction of communication inside organisation does not only flow in the vertical direction, downward or upward, through the organisational structure and formal hierarchy. It also flows in a lateral direction or more commonly called horizontal communication. Horizontal communication involves the coordination of information between departments on the same level in the organisation.

As brought forward by Greenberg and Baron (2008) horizontal communication can aid in accurate and efficient transfer of information between departments or employees. For instance, if designers create a new form for a product, they must be in total coordination with the engineers to meet specification of the product.

The horizontal communication is particularly paramount in manufacturing organisation working with make-to-order or customised products (Eunson, 2012). Since, many customised products do not follow standard protocol, it is very important that communication is working between the departments working with the product to ensure good quality and successful end-product (Littlejohn, 1989; Wheelwright and Clark, 1992). Littlejohn (1989) states that good horizontal communication promotes and enhances better teamwork and cooperation between departments.

Additionally, Hargie and Tourish (2009) mention that a good horizontal communication flow enables employees to talk openly about their concerns with other employees that might be in the same situation. Furthermore, from literature (Eunson, 2012; Hargie and Tourish 2009; Kreps, 1990; Littlejohn, 1989; Rogala and Bialowas 2016; Wheelwright and Clark 1992) five functions can be distinguished relating to horizontal communication:

1. It enhances information sharing between departments and employees, this is especially true when it comes to issues that can affect other departments.
2. It enhances task and assignment coordination to meet goals and deadlines set by top management.
3. It enhances problem solving between colleagues and departments through brainstorming.
4. It enhances participation and group feeling.
5. It helps resolving conflicts and disagreements that arises between and within departments.

However, the horizontal aspect of communication is not short of pitfalls. For instance, colleagues in different departments can get the feeling that they are in constant competition against one another for resources or rewards. As a result, employees tend to avoid communication with other employees and departments, as well as the trust levels within the organisation becomes low. According to Greenberg and Baron (2008) this sort of behaviour creates resentment among employees. Furthermore, resentment toward employees might be more openly communicated since there is no hierarchical structure to put people in line. Littlejohn (1989), states that when such environments overtakes a cooperative and friendly one, organisations are likely to suffer the consequence and thus the benefits related to horizontal communication are lost.

Many organisations are constantly looking for ways to create well working horizontal communication, however this is not a simple task to take on. There is a consensus among the reviewed literature (Littlejohn, 1989; Greenberg and Baron, 2008; Wheelwright and Clark 1992; Eunson, 2012; Simpson, 1959) that reducing barriers to horizontal communication is of high importance. Therefore, (Littlejohn, 1989; Greenberg and Baron, 2008; Wheelwright and Clark 1992; Eunson, 2012; Simpson, 1959) have identified factors that could help reduce barriers to communication, mainly horizontal communication:

- Implement a constant rotation of employees in different departments, thus stimulating consensus and understanding, as well a group feeling where employees have empathy towards colleagues.
- Avoid promoting competition between groups or departments with win-lose or reward outcomes, instead focus on distribution resources and information fair and equally.
- Focus on organisational effectiveness and efficiency through emphasis on the different departments' contribution to the overall outcome.
- Enable high-level of interaction and cooperation between departments through support and frequent communication.
- Plan for team activities out of the office to facilitate communication between employees and department in the horizontal communication. This reduces negative impact on communication in the horizontal direction.

2.6 Channels for Communication

In organisation there are many channels for communication. Above, the literature has touched upon different types of communication (interpersonal: formal and informal), the level of communication (dyadic, group and intra organisational) and the direction of communication (downward, upward and horizontal). This chapter will cover the different channel communication appears in, inside the organisation, between employees and departments.

2.6.1 Meeting

A meeting is a pre-planned assembly of individuals with the aim to debate and discuss a specific subject, issues or problem which can lead to action taken regarding the subject, issue or problem. Allen, Lehmann-Willenbrock and Sands (2016) mention that meetings are a setting for understanding individual's perspectives in organisation, meaning that in meetings individuals demonstrates their thought regarding ideas and issues. They further define meetings as *"a work-related interaction between two or more people that have purpose and structure."* (Allen, Lehmann-Willenbrock and Sands 2016, p.4340) Another explanation that focuses more on the operational aspects of the organisation is brought forth by Rogelberg, Scott and Kello, (2007) stating that meetings are the vehicle for communication which provides leaders with a tool to broadcast their vision, plans and strategies, as well as, enabling a response to the challenges and opportunities facing the organisation. This can be related to the aforementioned horizontal communication.

Meetings are used for various purposes inside organisations; decision making, information sharing, problem solving, brainstorming and sometimes it is just conducted to socialise with other individuals (Littlejohn, 1989; Eunson, 2012). Meetings are in principle a communicative tool used to achieve objectives and organisational targets. Like many other things in organisations meetings have different features, which they are shaped by, such as location of the meeting, time span of the meeting, if minutes are kept, who is invited and if there is any agenda to follow (Rogala and Bialowas 2016; Carlozzi, 1999). It is fair to say the meetings are an important factor in organisations. Carlozzi (1999) states that employees spend 25% of working hours in meetings, this percentage rises to 40% for employee in management positions and increases to an astonishing 80% for executives. Therefore, having productive and effective meetings is paramount.

Some authors (Baran, Shanock, Rogelberg and Scott, 2012; Allen et al, 2016; Leach, Rogelberg, Warr and Burnfield, 2009) state that successful meetings have roots in the way they are conducted. Meetings are an essential part of daily life inside organisations, it is a place of common activities where the pursuit for decision making, solving problems, setting goals, planning projects and deeper investigation into information is sought (Carlozzi, 1999). This notion is supported by literature (Baran et al, 2012; Allen et al, 2016; Leach et al, 2009) which identified the correlation between meetings and the productivity of employees, employee involvement, and employee motivation and satisfaction, putting forward that the structure of meetings is essential in achieve the aforementioned. Moreover, several studies (Baran et al, 2012; Leach et al, 2009; Geimer, Leach, DeSimone, Rogelberg and Warr, 2015) found that the more meeting employees are attending the more they feel that there is a high workload which in turn affects the perception of organisational communication negatively.

Poor structured meetings are found unproductive and ineffective (Leach et al, 2009). Previous studies (Geimer et al, 2015) have shown that there is a remedy for this problem. Such remedy is meetings that have a clear agenda, starting at the time agreed upon and where the organiser (the person who called for the meeting) is active in the meeting. This has showed to be perceived effective and productive among employees (Geimer et al, 2015). According to Leach et al, (2009) the above-mentioned scenario will boost the participants perception of the meeting being effective and will allow the meeting to run smoothly. Continuing with the subject of effectiveness, Baran et al, 2012 and Geimer et al, 2015 have identified that there is a relationship between job satisfaction and the perception of an effective and productive meeting. This evidence highlights the fact that meetings within organisations can shape how employees perceive the organisation they are working in.

The question is how can organisation use meeting to improve communication inside the organisation. Rogelberg et al, (2007), mentions that organisations must focus on three aspects; improving managers' skills in meetings, improving employees' skills in meetings and implement a best practice for conducting meetings. Other authors (Baran et al, 2012; Geimer et al, 2015; Allen et al, 2016; Scott et al, 2012; Leach et al, 2009; Littlejohn, 1989; Eunson, 2012) all touch upon: (1) the importance of knowing when to call a meeting. Here the organiser needs to have a clear subject as focus and the reason for calling a meeting, who need to participate in the meeting, when the meeting starts and the length of the meeting. (2) Notify participants timely about the meeting, make sure to have an agenda which participants can get in advance. This will help the invited employee to prepare and participate with the right mind set. (3) Set up clear rules and make sure it is understood by employees and (4) Notify key players so that they understand their participation is important. (5) Making sure that negative behaviour is deflected, this can be achieved through clear rules for the meetings (see 3). (6) An active organiser promotes interactive response, therefore the person in charge of the meeting should be active in the discussions and (7) Conclude the meeting by outlining what the next step is and communicating that there will be a follow-up on what has been said and inform participants that minutes from the meeting will be send out. It is important to have taken meeting minutes because it can work as feedback for the organiser and as a fresh reminder from the attendees of what was discussed.

Moreover, several authors (Littlejohn, 1989; Baran et al, 2012; Geimer et al, 2015; Allen et al, 2016; Scott et al, 2012; Leach et al, 2009; Carlozzi, 1999; Antony, 1976), it is possible to identify different types of meetings which can take place inside organisations. Here the most frequenting described types of meetings that could be distinguished are presented:

The first meeting type concerns those meetings about status update. These meetings are the ones that teams, groups and departments hold regular. In those meeting the primary objective is to create an alignment between employees and the progress of different projects, challenges encountered and what the next step might be.

The second meeting types is the information meeting. The main goal with those meetings is to share information about upcoming projects, new directives, new products and new changes. In these meetings attendees most often take a passive role, meaning that they are more of a listener in the meeting and the organiser or speaker are the one talking for the most part.

Third, there are problem solving or discussion meetings. In these meetings the organization's goal is to address problems that have been identified and try to put forward solution and strategies for solving them. The goal is that these solution and strategies can be standardised and taught throughout the organisation.

Lastly, meeting type that has been identified through the above-mentioned literature is decision meetings. Decision making meetings is what its name applies, here members of teams, groups or departments are involved in taking decisions. In this sort of meetings, it is paramount to select the correct individuals for participation, to ensure that employees with correct expertise and knowledge are involved. Who attend the meeting depends on the complexity of the decision to be made, when there are simple decisions to be made, non-managerial employees attend and when the decision is complex, top management is involved. Although, sometimes specific selected individuals that have expertise and valuable knowledge regarding the specific subject talked about are invited for complex decision-making meetings.

2.6.2 Email

The use of email plays an integral role in organisational communication. Although, face-to-face meetings has a higher level of communication richness, than that of emails (Lee, 1994), the latter allows much faster communication as well the opportunity to communicate over greater distance. Lucas (1998) states that "*organizational communications are made easier, faster and more efficient by E-mail.*" (Lucas 1998, p.24) Additionally, Byron (2008) states that email has increased the information sharing within organisations. This is believed to be because emails have been identified a cost-effective way of communication that enhances efficiency and effectiveness due to that it has no geographical barriers and it is a fast way of communicating (Madanchian and Taherdoost, 2016; Lucas, 1989; Mark et al, 2016; Jerejian, Reid and Rees, 2013; Mano and Mesch, 2010). For instance, colleagues in different location far from each other can communicate of work-related matter. It could be that one of them is at a supplier's plant while the other is working from home. It is this attribute that has made email such a favourable communication channel among employees at organisations.

Today, most employees use email to communicate information externally with suppliers and customers, and internally with colleagues within the same department or between department and with employees positioned in different hierarchical levels inside the organisation (McManus, Sankar, Carr and Ford 2002; Byron, 2008; Madanchian and Taherdoost, 2016). Moreover, McManus et al, (2002) identified that organisational communication is positively affected by emails. It could be distinguished that it affected organisational communication at different levels, e.g. dyadic, group and intra organisational and in different directions, e.g. downward, upward and horizontal. McManus et al, (2002) also found that emails enhanced organisational communication through, faster response time, improved decision making and increased access to other employees in the organisation.

However, other authors points to the fact that, although the usage of email create fast and effective organisational communication, employees are spending more and more time interacting through email at work (Lucas, 1989; Mano and Mesch, 2010). With a low cost to create and send information through email and the little effort it takes to add receivers in greater amount, there is the negative effect of massive overuse and overload of emails. Meaning that the those on the receiving side of emails must invest more time every day to process emails in their inbox (Lucas, 1998). Even though organisations are aware of this problem, the amount of emails increases (Madanchian and Taherdoost, 2016; Jerejian, Reid and Rees, 2013). Antony (1976) states that organisation need implement criteria and rules for email, which could control the use of it and making sure that it is not overused.

Another problem with communication through email is the risks of miscommunication. Miscommunication will be used to describe that information sent between sender and receiver can lead to misinterpretations and misunderstanding. It can be identified in Byron (2008) that due to the lack of communication richness in emails, miscommunications are common. In an email the sender communicates information using certain codes to create her or his message and the recipient through experience, knowledge and other factors tries to decode this message, but because the richness in emails are at a low level one cannot fully present emotions or other clues which otherwise might have been possible through e.g. face-to-face meetings. However, this does not suggest that miscommunication only occurs in email, but that it is harder to express and accurately convey what one means through it (Byron, 2008). Individuals interpret information differently and even through face-to-face meetings miscommunications occurs. This would suggest that there might be an increase in conflicts between employees, due to high level of miscommunication.

Lastly, in the literature reviewed it is possible to distinguish strengths and weaknesses regarding usage of email. Email communication in organisations is e.g. a clear documentation of what has been said (Mano and Mesch, 2010), ensuring that same message can reach everyone within departments and between departments (Jerejian, Reid and Rees, 2013), enables asynchronization which is that the sender can send the message at one time and the receiver can get at another time (when she or he opens the email) (McManus, Sankar, Carr and Ford 2002), more information can be sent at once (Madanchian and Taherdoost, 2016) and lastly it helps improve both upward and horizontal communication (Lee, 1994). One of the weaknesses with emails is that employees start to send email without needing to do so, increasing the chances of information overload which in turn could lead to stress and ineffective organisational communication (Lucas, 1989).

2.7 Cooperation

Good communication will result in a positive atmosphere amongst the employees, this positive atmosphere will result in motivated and loyal employees (Stevanovic and Gmitrović , 2015). Motivated employees who are loyal to the organization are ready to work hard so that the organisation can reach the organisational objectives. This claim is supported by Hargie and Tourish (2009) which suggests that good organisational communication between departments enhances morale, heighten employee's productivity and promotes a sense of engagement, thus helping the organisation to compete in the market more successfully. Well working organisational communication does not only result in positive atmosphere it also improves the cooperation and thus efficiency of the organisation (Kreps, 1990). This is supported by Kujala, Lehtimäki and Pučėtaitė (2016), stating that good communication results in high level of trust among employees in the organisation, which in turn lead to positive and productive relationships inside the organisation.

Tjosvold (1984) finds that when employees work together on a task by combining their energy, perspectives and ideas, they can solve the most complex tasks faster and more effectively than if the task would be solved by individuals. Tjosvold (1984) goes into the possible barriers of cooperation, one of them being that individuals within the group that is to cooperate do not see the mutual benefit of the group succeeding or do not understand the goal aimed for. These individuals then start competing with other group members to proof that they are more competent or more independent than the rest of the group, instead they should be competing together for a mutual goal.

Schalk and Curseu (2010) say that the quality of the cooperation is what can distinguish successful organisations from those less successful. And thus, the management in each organisation needs to ensure good cooperation because then the organisation achieves more flexibility in production and can then in turn change easily if needed.

Deutsch (2006) goes into that cooperation will lead to better productivity as well as improved psychological health. Deutsch (2006) discusses the theory of cooperation and competition. There he goes into the goal interdependence, that there are two ways of goal interdependence. A positive one, e.g. you swim together you sink together. A negative one, e.g. you swim even if the other sinks. A positive interdependence can be e.g. individuals that have the same goal, are on the same mission, relying on each other due to not being able to finish certain tasks without each other and even that the reward is distributed evenly between them if the goal is achieved. A negative interdependence can thus be related to that the reward is distributed unevenly depending on the result of everyone.

2.8 The Affinity-Interrelationship Method

The Affinity Interrelationship Method (AIM) is a problem-solving tool that can be used for analysing qualitative data. It is inspired by Shoji Shiba 19 step and uses a systematic approach of two of the seven management tools, the affinity diagram and the interrelationship diagram (Alänge, 2009). The basics approach of the AIM-method is influenced by the K-J Method, developed and presented by Jiro Kawakita in 1953 (Scupin, 1997). In Scupin (1997), the KJ-method is recognised as a qualitative brainstorming method. This is the same conclusion drawn by Alänge (2009) regarding the AIM-method. However, looking at both methods, the AIM-methods enables more cooperation between participants. Although, there are similarities to Kawakita's and Shiba's methods, the AIM method has a higher emphasis on critically examining the interrelationships of data. Moreover, one of the biggest advantages with AIM, if the conclusion is found trustworthy, is that it can lift the consensus on certain problems and provides a starting point for future improvements.

The tool has been optimised regarding how many that should attend the workshop, how the working space should be arranged and what should be done in every step. The instructions clearly state that if the working instructions are not followed, issues will occur regarding the conclusion and how long time is needed for the workshop. The AIM-method consists of ten steps, where step one is to formulate a question concerning an issue the organisations want to solve, and the question must refer to something that has happened in the past, e.g. "what has been the problem with …". Alänge (2009) states that is it preferable to use "was" rather than "is" when formulating the question, because it will help participants to focus on facts during data collection. The steps in the AIM-method can be grouped into four stages. In Stage 1 emphasis is on identifying the problem at hand to analyse and collect data, here Post-Its are used to write down what the participants believe is causing the problems at hand. Stage 2 is where participants need to secure the quality of the data and start to look at grouping together the Post-Its. When stage 2 is accomplished the group will have a broad picture of the different subjects and themes suggested by the participant that is affecting the problem at hand. Now the group moves to Stage 3, where higher level grouping, correlation between groups and a final layout is carried out. Lastly, in Stage 4 participant evaluate through voting and later answers the original question in step 1 with a concluding sentence. Below the steps in each stage of the AIM is presented.

Stage 1:

1. Formulating question
2. Warm-up
3. Collecting data

Stage 2:

4. Clarifying the meaning
5. Grouping

Stage 3:

6. Higher level grouping
7. Show connection
8. Final layout

Stage 4:

9. Evaluation
10. Concluding sentence

The AIM method is used to organise facts around a complex problem in a structured matter by involving employees from same department or cross departments (Alänge, 2009). Further, it is used to develop a shared understanding and consensus of the root cause to issues.

3 Method

The following chapter provides an overview of the approaches that have been used as a methodological structure for this case study. The approach in this study is described in terms of a qualitative analysis. Further, methods used for collecting different types of data will also be explained. Moreover, the aspects of trustworthiness and ethical consideration of the approach taken will be clarified.

3.1 Scientific research

In this study, the path of scientific research was chosen. Scientific research consists of an investigation where scientific methods are used systematically to investigate the relationships of a single case or phenomenon while trying to answer a research question or questions. Another aspect of a scientific research is that findings are not determined in advance, rather it is determined by procedures conducted throughout the research (Bryman and Bell, 2015). At the start of the thesis two research questions were put forward to help with navigation, delimitation, and scope of the research, as well as guidance towards finding related theory.

3.1.1 Research approach

In this thesis the authors have chosen to use both the qualitative and quantitative research approach. Where interviews, questionnaire and workshops are core elements which has been conducted in this thesis. Qualitative approach is in Bryman and Bell, (2015) and Kothari (2004) described to have rich textual description as a main strength, enabling identification of intangible factors such as emotions, beliefs, communication, opinions, behaviours, relationships and experience. A quantitative research approach on the other hand can easily be transformed into numbers to quantify issues or problems and is often presented in form of tables or graphs (Bryman and Bell, 2015). Quantitative research has measurement as a central role, providing connection between the findings of observations and mathematical expression to understand relationships. Using both qualitative and quantitative research approach enabled a more flexible way of gathering data, it also brought forward both the qualitative and quantitative perspective of the issue investigated in this thesis.

Moreover, Creswell (2014) identifies the selection of both a qualitative and quantitative approach as mixed method design. Creswell (2014) present the possibility to combine both qualitative and quantitative research data in a research study. This method allows the research to collect, analyse and mix both qualitative and quantitative data (Creswell 2014). This form of a mixed method design is referred to as convergent parallel mixed methods and is explained by Creswell (2014), as when researchers collect both quantitative and qualitative data at the same time and incorporates the information in the interpretation of the final results.

The selection of using both qualitative and quantitative research approach has been used to, firstly, use the results form one method to aid in informing and developing the other methods (Bryman and Bell, 2015). Secondly, it has helped the authors to look for contradictions and new perspective of the issue at hand (Bryman and Bell, 2015). Thirdly, it has aided in enhancement, clarification and elaboration of results from one method with findings and results from other methods (Bryman and Bell, 2015). Lastly, it has contributed to triangulation of the findings and results through corroboration and convergence of results from different methods (Bryman and Bell, 2015).

3.1.2 Research strategy

A research strategy is referred by Remenyi (1998) as a roadmap of how researchers can go about answering the research questions asked. Two strategies that to answer research question or questions are deductive and inductive reasoning strategies. A deductive strategy handles theory as a basis for developing research question or questions and then designs or selects methods to test the research question or questions against observations or findings. On the other hand, an inductive reasoning strategy generates new theory from existing data. In inductive reasoning researchers look at data gathered and observations to generate meanings which can help identify relationships and patterns, thus helping to build new theory. Both of these reasoning strategies has weaknesses. Bryman and Bell (2015) and Kothari (2004) bring forth that one of the weaknesses of both of the reasoning strategies is that they have a linear design.

In this thesis the authors have applied the deductive reasoning strategy. The deductive reasoning strategy has been beneficial in explaining causal relationship between theory and findings, explaining if theory is valid in the circumstance of the manufacturing organisation in this thesis.

3.1.3 Research design

Selecting a research design is important, according to Bryman and Bell (2015) it provides a basis for the collection and analysis of gathered data. There are many options to choose from when selecting a research design for this research. Habib, Pathik and Maryam (2014), Bryman and Bell (2015), and Remenyi (1998), bring forth several research designs, such as experimental design, longitudinal design, case study design, comparative design, and cross-sectional design. This study has adopted a case study design, which is a detailed and comprehensive investigation of a certain situation, circumstance/s or location, such as organisation, community or specific departments in an organisation (Remenyi, 1998). The case study in this thesis looks at a single case and tries to gain understanding of the situation regarding communication between departments, fulfilling the criterion of a specific subject or phenomenon that characterises a case study. This is as well-argued by Bryman and Bell (2015), which states that a case study is performed to investigate and conduct research focusing on one or few subjects with the purpose to gather comprehensive data, information and create understanding of the subject studied.

As additional argument for why this research uses a case study, the investigators have chosen to adapt the definition used by Gerring (2004). Gerring (2004) states that a case implies a phenomenon with set boundaries, observed at a specific point in time or within a specific span in time. Therefore, a case study strives to understand the subject under scrutinisation rather than explain it. The goal is to generalise how communication issues can be found and improved within organisations. According to Habib, Pathik and Maryam (2014), Bryman and Bell (2015) and Remenyi (1998), a variety of methods can be applied both form the quantitative and qualitative approach to investigate a subject or phenomenon.

The questionnaire was conducted to understand the current situation at the manufacturing organisation. In the questionnaire, questions were asked about communication and cooperation and areas that the investigators thought might affect communication, e.g. job description, workload, trust, reporting to supervisor, meetings, departments and organisational strategy. This quantitative method was employed to show the current situation in numbers, and it was favoured by the authors, because data presentation in numbers gives a good visualisation of the issue at hand. The questionnaire contributed with direction in which the authors could take to find the issues regarding communication problems at the manufacturing organisations. It helped narrow the border of the topic at hand, so that the focus would be on the issues that could answer the research questions.

Furthermore, interviews were conducted as a second method in this thesis. The interviews were carried out in an informal setting, e.g. in the office during coffee breaks, lunch breaks or when meeting in the corridors. The reasons for conducting interviews was, firstly, because it enables a discussion with employees where different views of communication and cooperation is brought forward. Secondly, it gave the investigators increased knowledge of how communication and cooperation have worked during a longer period, than just the time span of this case study. Thirdly, the interview approach was beneficial to this case study due to its characteristics, enabling the interviewer to ask follow-up questions, thus getting more detailed answers concerning communication. Lastly, the results of the interviews were intended to help the investigators develop a theme to focus on in the AIM session, as well as, assisting in creating a question to be investigated during the AIM session. The intention of interviews was to assist the investigators in answering the first and second research questions; *What are the underlying factors causing intra-organisational communication problems between departments in manufacturing organisations?* and *What recommendations can be made for improvements of intra-organisational communication at manufacturing organisations?*

Once the data from the interviews was extracted and analysed, the final phase (AIM sessions) of the case study was initiated. The AIM method was chosen to obtain further in-depth information and capture the complexities of communication and cooperation. Another important reason for choosing the AIM method was that it enabled employees to create a dialogue and be part of a discussion regarding their ideas on what is causing problems. The hypothesis was that through AIM sessions different aspects affecting communication and cooperation between departments in a negative way would be brought to light. This would enable the investigators to create a plan suggesting changes and improvement, while helping the manufacturing organisation focusing on and investing more time in continuous improvements and getting a better understanding of the employees' perspectives. The AIM sessions were designed to capture departments view on the problem with communication and cooperation. Hence, each department had its own workshop with its own personnel. Meaning that there were no workshops with a mix of employees from the different departments. The intention of the AIM sessions was to assist the investigators in answering the second research question, *What recommendations can be made for improvements of intra-organisational communication at manufacturing organisations?*

3.2 Methods for Data Collection

In this section the methods used to collect data will be presented. A description of what was included in the methods will as well be presented. In this case study the authors have selected to use questionnaire, interviews and AIM sessions to collect data. In table 1 the sample size of each methods is displayed, as well the distribution of the sample size regarding the different departments in the case study.

Department	Sample size Questionnaire	Sample size Interviews	Sample size AIM session
Logistics	10	2	5
Manufacturing Engineering	8	1	5
Production	8	1	4
Quality	5	1	4

Table 1, the sample size of the questionnaire, interviews and AIM sessions and which department the respondents belonged to.

3.2.1 Questionnaires

An anonymous questionnaire with closed questions was sent out through email by the organisation's supervisor to all white-collar employees, working at the chosen departments. Closed questions are presented with fixed list of alternatives from which the respondents must choose an answer (Bryman and Bell, 2015). The questionnaire was made with Google Forms. Google Forms was chosen because it is easy to use and easy to withdraw data from the application. The questionnaire consisted of closed questions about the workplace, where subject regarding cooperation and communication between departments, department strategy, work environment, information flow between department and the meeting culture were touched upon. Since, the investigators wanted to create a questionnaire that was easy to complete for the respondent, closed questions were asked.

The purpose of this questionnaire was to get an understanding of what areas were affected by the poor communication and what the current situations looked like. In the questionnaire, respondents could choose how they experience their place of work by selecting one of the already set answers. Therefore, different scales were used to better help the participant answer the questions and to make it easier for the investigators connect the data to theory. Firstly, Nominal scale were used to see which department the respondent belonged to; "Which department do you belong to?" and the possible answers were "Logistics, Production, Quality and Manufacturing Engineering". Secondly, Ordinal scale, where the questions emphasises ranking a subject in certain order depending on magnitude, due to the non-standard of measurement of differences (Habib, Pathik, and Maryam, 2014). An example of this is the question "On average how many hours a week do you spend in meetings?" and possible answers were "1-4, 5-8, 9-12, ..., 37-40". Lastly, Likert scales, which is a scale that uses two polarities, usually extreme ones to measure the respondent´s attitude towards a certain statement was used (Habib, Pathik, and Maryam, 2014). The response options range from how strongly participant agree or disagree, with equally many options on both sides of the neutral middle option (Habib, Pathik, and Maryam, 2014). Further, another question with a Likert scale was, "Do you find the meetings effective?". The possible answers were ranging from 1 to 5, were 1 was "Not effective at all" and 5 being "Very effective".

The total amount of employees in the chosen departments are 36 and the total respondents of the questionnaire was 31 (see table 1). This gave us a response rate of 86 %.

3.2.2 Interview

To enhance understanding of the problems and issues regarding communication between different departments at the organisation, short and unstructured interviews were conducted. The interviewees were chosen randomly amongst the employees from the Logistic, Manufacturing Engineering, Production and Quality departments. In total 5 interviews were conducted (see table 1) and the interviews took between 10 and 15 minutes. Interviews mainly consist of three types of structure, unstructured, semi-structured and structured (Bryman and Bell, 2015). These different structures or designs describe the level of control the interview should demonstrate, for example, an unstructured interview is characterised by allowing the interviewee to direct the conversation. The purpose of this is to extract a broader range of information. According to Bryman and Bell (2015), unstructured interviews are beneficial in the beginning of projects, since it enables an initial and wide understanding of the subject to be investigated.

The purpose of these interviews was to understand and identify the patterns of behaviour that have been causing issues regarding intra-organisational communication between departments, as well to see the different perspective of the issues at hand. Rather than inviting employees for an interview, they were "caught" at the coffee machine, at the cafeteria or at their desk. Two main questions were asked in these interviews: "How do you perceive the communication between departments?" and "How do you perceive the cooperation between departments?". These two questions are open for many interpretations by the respondent and it does not imply that communication or cooperation is poor or good. Due to the unstructured design of the interviews different follow-up questions were asked. Although two more frequent follow-up questions were "is there anything else you would like to add concerning communication?" and "is there anything else you would like to add concerning cooperation?".

For analysis and to ensure not missing out of any important information, the interviews were conducted by both authors, where one author to notes and the other talked to the interviewees. This was thought to be most beneficial to secure information during the interviews. Bryman and Bell (2015), argues that conducting interviews where two researchers are present is more effective. Bryman and Bell (2015) explain that while one of the researchers can lead the interview and follow up with question, the other researcher can focus on taking notes and analysing the answers, ensuring that no information is missed. When interviews were finished, notes of what was thought to be important for answering the research questions were written in a diary. Notes were mainly focusing on what the interviewee thought was problematic regarding cooperation and communication between departments as well as what the suspected root causes was. It was also noted which department the interviewee belonged to and what role he/she had within that department.

3.2.3 Affinity Interrelationship Method

The AIM session was conducted with representatives from the Logistic, Manufacturing Engineering, Production and Quality departments. The AIM sessions were held for each department separately. The workshops included representatives from all levels within the departments, however all representatives were employed in the white-collar division. All employees at each of the departments were invited to be part of the AIM sessions through a calendar invitation sent two weeks prior to the AIM session. The invitation was sent out by the organisation´s supervisor through the intra-organisational mail. In total four workshops were conducted with 18 representatives (see table 1). Furthermore, the shortest AIM session took approximate two hour and ten minutes, while the longest AIM session took two hour and forty minutes. All AIM sessions were conducted in Swedish and have been translated to English. This is also the case regarding all Post-Its, which have been translated from Swedish to English.

To familiarise the employees with the AIM method a presentation was held in the beginning of each workshop to explain the different steps and how the results from the AIM method will be used. This process was conducted in exact manner during all sessions. The AIM sessions were audio-recorded, and notes were taken to ensure that information was not lost. One researcher took notes while the other researcher guided the participants through the AIM sessions. Notes taken during the AIM sessions were mainly focusing on, when employees showed up to the workshop, meaning if they were late or if they were on time. If participants brought their computers, telephones, or other material with them. If participants attended the whole workshop or not. Notes were also taken when participants made comments on what they thought was the problem with co-operation and information flow between departments.

The AIM session started with the investigators presenting a predetermined formulated question to follow the purpose of answering the thesis/research. The question was the following: "What has been the problem with communication and cooperation between departments?". The question was meant to be the base for the discussion to be generated for the AIM session. After the question was presented the participants started out with a 5-minute warm-up, where the group was asked to discuss the subject of poor communication and cooperation. Participants would discuss the subject from their perspective without being interrupted, however before proceeding to the warm up step, the facilitators initiated a dialogue discussing the predetermine question. The reason for this was to create clarification and alignment among the participants regarding the question. After a short discussion, all participants agreed that they had understood the question and believed it was suitable for the purpose. Once this was agreed upon the warmup step was completed. Then the data collection step was initiated. Participants were in this step informed by the facilitator to focus on the scope and the level of analysis they should conduct to answer the question. All participants agreed that the data they would provide should be well formulated to generate result/s in accordance to the question and purpose of the AIM session.

3.3 Trustworthiness

Just like reliability and validity are used for assessment in a quantitative approach, the concept of trustworthiness concerns the assessment of a qualitative approach (Bryman and Bell, 2015). Bryman and Bell (2015) further explain that the concept of trustworthiness includes the criteria of credibility, transferability, dependability, and confirmability, and when executed well ensures the quality of the data and findings of a research. This is as well mentioned in Remenyi (1998) who states that trustworthiness investigates if the research is credible, dependable, transferable, and confirmable.

The criterion of credibility deals with the purpose of the research, it refers to the level of confidence the authors have in how the analysed data addresses the intended objective. To achieve this, triangulation can be applied, which is the concept of using more than one source of data in a research. To fulfil the credibility criterion questionnaires, interviews and workshops have been conducted, hence ensuring that findings are consistent, accurate and true.

Secondly, transferability refers to the degree to which the findings of this research can be generalised and applied to other situations or context within another population (Remenyi, 1998). Therefore, thick description with rich details, of interviews, workshops have been carried out, as well as documentation of sample size. sample size to ensure higher degree of transferability. However, it is important to understand that the degree of generalisation in qualitative researches is low. Additionally, the AIM sessions were audio-recorded to ensure that no information was missed.

Thirdly, dependability suggests that the way of carrying out the research should stand the test of time, meaning that the procedure through which the findings were obtained must be repeatable, consistent and include sufficient information for other researchers to replicate. This also relates to the aspect of reliability in the quantitative research approach, which looks at the degree a research or study produces consistent results. This research will be audited by the organisation's supervisor, as well by an opposition group of students at Chalmers University of Technology.

Lastly, confirmability which addresses the issues that findings should not be affected by biases and personal interests (Remenyi, 1998). Bryman and Bell (2015) as well argue findings in a research must be presented as fair as possible and not contain researchers' beliefs. Looking at the definitions, it is reasonable to conclude that confirmability emphasises the neutrality of the data. Another way which the confirmability of this thesis has been address is that interviewees and attendees of the AIM session have had the possibility to look at the findings of the thesis. Hence, giving the employees the chance to confirm or not confirm what has been found. Conformation of the findings means that the employees recognise what has been found by the authors.

3.4 Ethical considerations

Ethical considerations are paramount to consider when conducting a case study (Bryman and Bell, 2015); (Remenyi, 1998). Therefore, steps have been taken to assure that these ethical considerations are applied. Bryman and Bell (2015), highlight four principles in need of attention when looking at the ethical aspects; lack of informed consent, harm to participant, invasion of privacy and deception. These principles are as well put forth by Remenyi (1998) as the pillars of the ethical aspects, stating that it is important to consider these ethical aspects since they work as a safety net for those participating. As mentioned above when conducting the questionnaire, interviews and the AIM sessions all participant were informed about the subject, how the results would be handled, the purpose of the activities, to whom the results will be presented and the opportunity to withdraw any answer given during the activities. To enable participant to withdraw given answers, they were given notes of their interview answers. For the questionnaire and interview; gender, age and education level were left out to ensure high degree of anonymity. Additionally, the names of employees participating in workshops were encrypted in our notetaking as “Participant 1,2,3,4” to keep anonymity of participants.

4 Findings

In this chapter, the findings in the case study will be presented. Data that has been gathered through the questionnaire, interviews and AIM sessions will be presented. The findings will be presented in the same order as the research was conducted with exception from the interviews, which were carried out at various stages.

4.1 Questionnaire

Below you will find parts of the results from the questionnaire conducted. The questions presented are those that relate to the research questions. In total the questionnaire was sent to 36 employees, however the sample size for the questionnaire was 31 employees and this corresponds to an answering rate of 86%. For ease of reading the results will be presented with graphs.

4.1.1 Questionnaire findings

Figure 3 shows the results from the questionnaire regarding the questions “Are you satisfied with your daily work?”. The answering range is from 1, “Not satisfied at all” to 5, “Very satisfied”. Two respondents (6%) state that they are very satisfied with their daily work. 13 of the respondents (42%) give it the rating of a four. 12 of the respondents (39%) rate the satisfaction as three and four answers (13%) are rated as two.

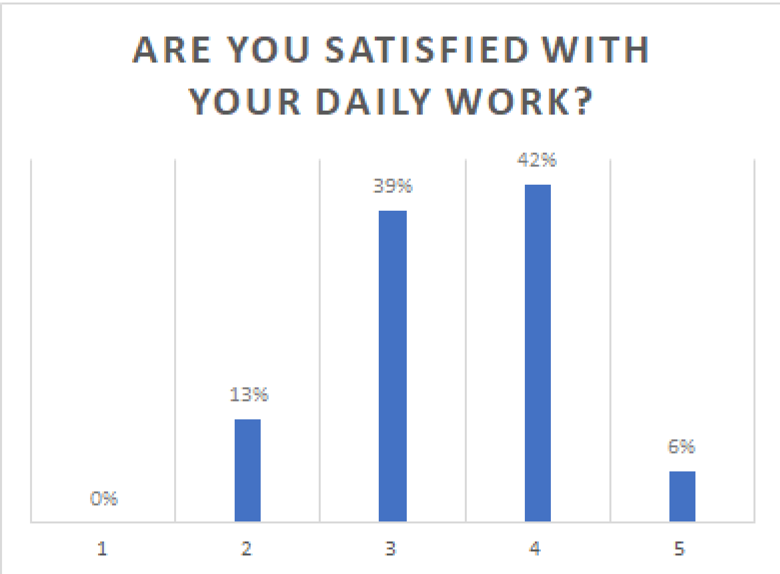

Figure 3, results from the question "Are you satisfied with your daily work?"

Figure 4 shows the results from the question “How would you rate your workload on daily basis?”. The answering range is from 1, “I have time over for other things” to 5 “I do not have enough time”. Where 14 respondents (45%) rated the workload as “I do not have enough time”. 11 of the respondents (35%) rated the workload as four and six (19%) rated the workload as three.

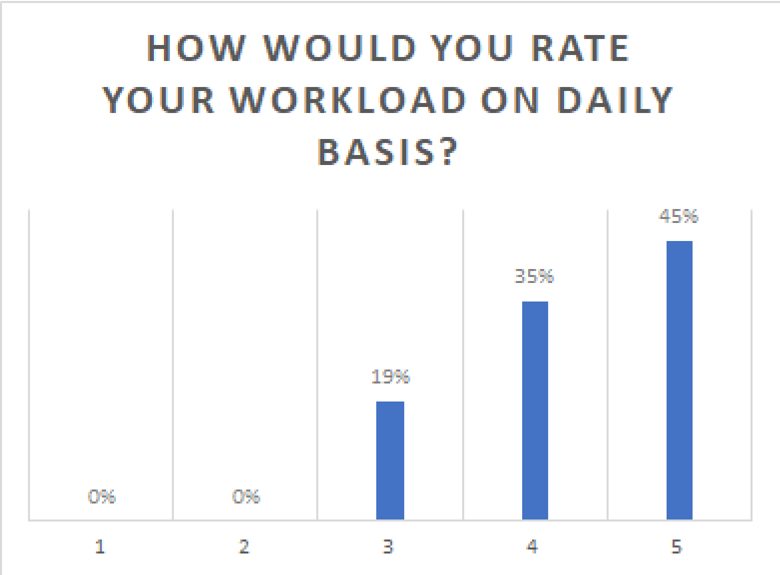

Figure 4, results from the question "How would you rate your workload on daily basis?".

Figure 5 shows results from the question "Do you have clear individual goals you work towards on a daily basis?". Were the answering range being from 1, "Not clear" to 5, "Very clear". Nine respondents (29%) rated it as a five. Nine respondents (29%) rated it as four. Seven respondents (23%) rated it as three. Five respondents (16%) rated it as two and one respondent (3%) gave it the rating of one.

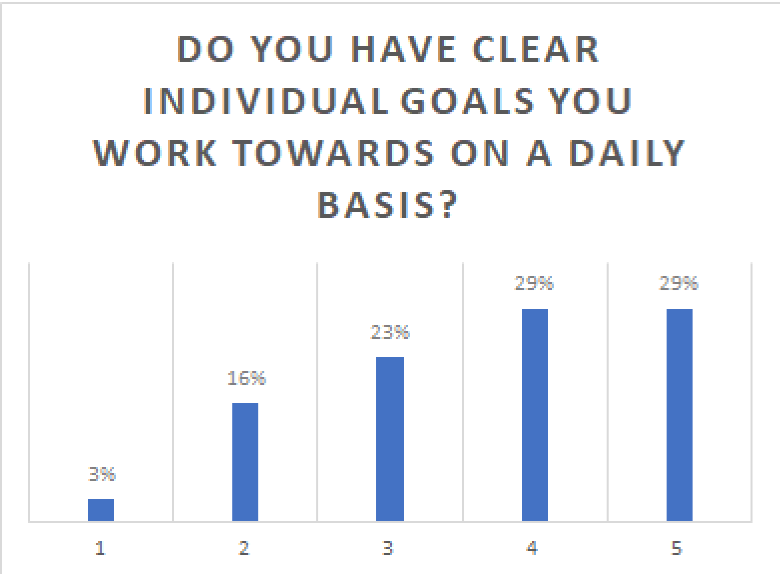

Figure 5, results from the question "Do you have clear individual goals you work towards on a daily basis?"

Figure 6 shows the results from the question "Do you work according to your job description?". Eight respondents (26%) answered "Yes". Five respondents (16%) answered "No". Eight respondents (26%)

answered “Sometimes”. Five respondents (16%) answered “I do not know my job description” and five respondents (16%) answered with “I do not have a job description”.

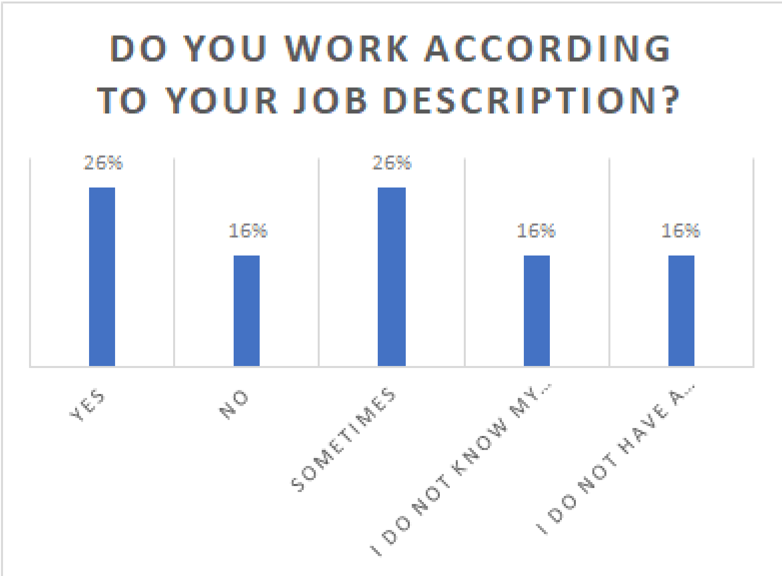

Figure 6, results from the question “Do you work according to your job description?”

Figure 7 shows the results from the question “On average how many hours a week do you spend in meetings?”. 13 of the respondents (42%) answered that they spend 1-4 hours. Seven respondents (23%) answered that they spend 5-8 hours. Five respondents (6%) answered that they spend 9-12 hours. Two respondents (6%) answered 13-16 hours. Two respondents (6%) answered 17-20 hours. One respondent (3%) answered 25-28 hours and one respondent (3%) answered 33-36 hours.

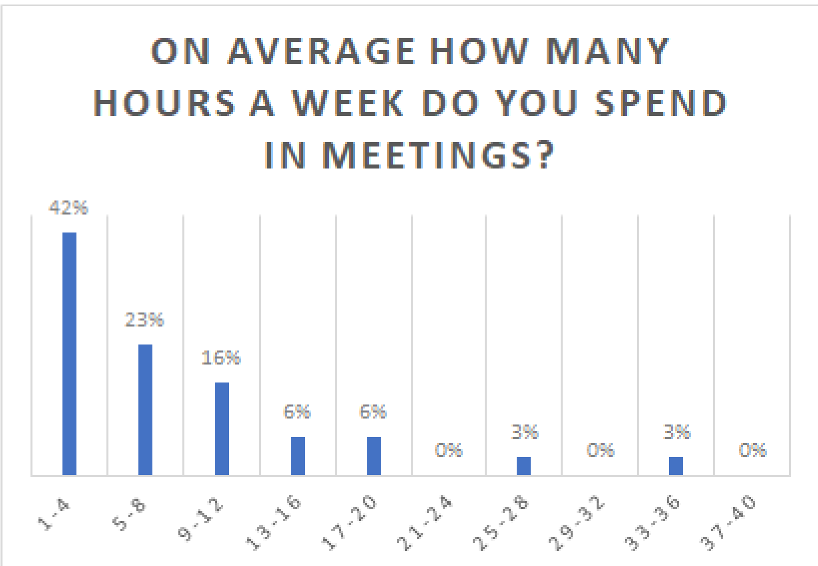

Figure 7, results from the questionnaire regarding the question “On average how many hours a week do you spend in meetings?”

Figure 8 shows the results from the question “Do you find the meetings effective?”. Where the range of answering is from 1, “Not effective at all” to 5, “Very effective”. Two respondents (6%) answered with five. Six respondents (19%) answered with four. Ten respondents (32%) answered with three. Twelve respondents (39%) answered with two and one respondent (3%) answered with one.

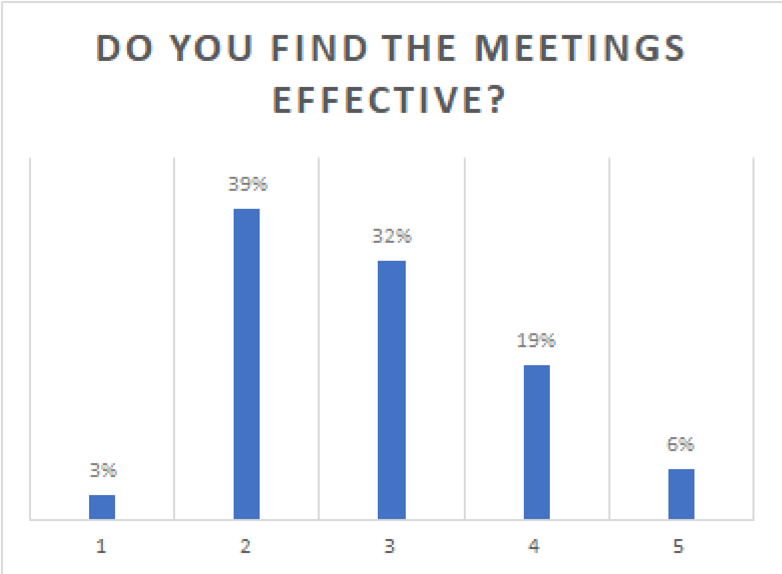

Figure 8, results from the questionnaire regarding the question “Do you find meetings effective?”

Figure 9 shows the findings from the question “Do you prepare yourself for meetings?”. 23 respondents (74%) answered “Yes”. Seven respondents (23%) answered “Yes, if required from the person holding the meeting”. One respondent (3%) answered “No”.

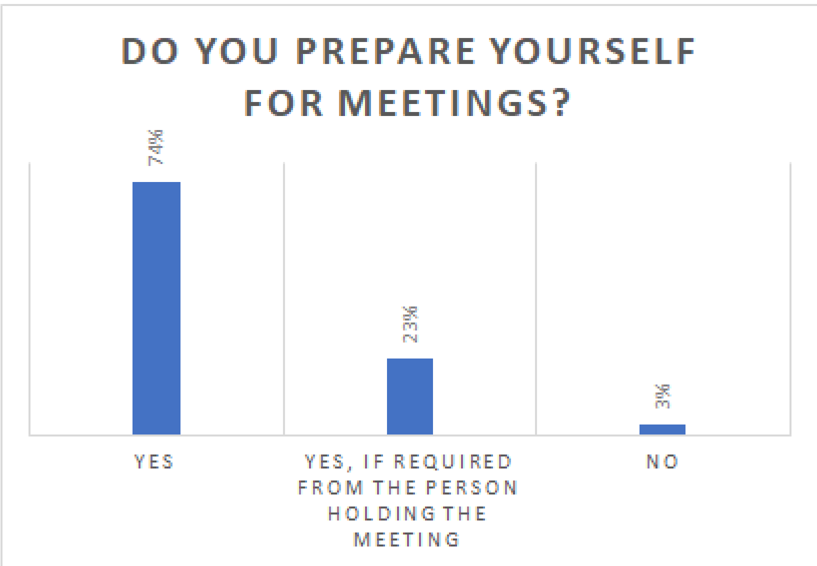

Figure 9, results from the questionnaire regarding the question “Do you prepare yourself for meetings?”

Figure 10 shows the results from the question "How would you rate the level of communication in the organisation? ". The answering range is from 1, "Very poor", to 5, "Very good". One respondent (3%) answered with five. Four respondents (13%) answered with four. Nine respondents (29%) answered with three. Twelve respondents (39%) answered with two. Five respondents (16%) answered with one.

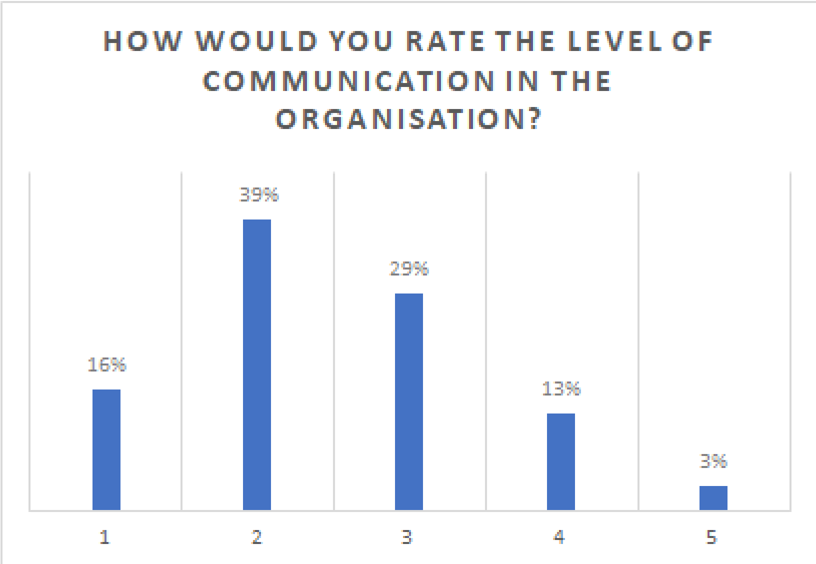

Figure 30, shows results from the questionnaire regarding question "How would you rate the level of communication in the organisation?" and the answering range is from 1, "Very poor", to 5, "Very good".

Figure 11 presents the results from the question "How would you rate the level of cooperation with your colleagues from other departments" and the answering range is from 1, "Not good" to 5, "Very good". Two respondents (6%) rated it as five. Nine respondents (29%) rated it as four. Ten respondents (32%) rated it as three and ten respondents (32%) rated it as two.

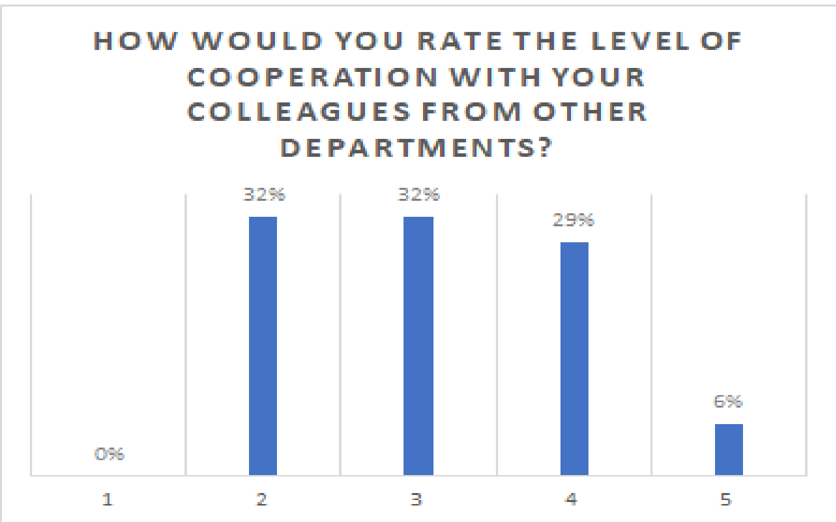

Figure 41, results from the question "How would you rate the level of cooperation with your colleagues from other departments?"

Figure 12 presents the results from the question “How would you rate the level of cooperation with your colleagues within your department?” and the answering range is from 1, “Not good” to 5, “Very good”. Two respondents (6%) answered with five. 19 respondents (61%) answered with four. Eight respondents (26%) answered with three. Two respondents (6%) answered with two.

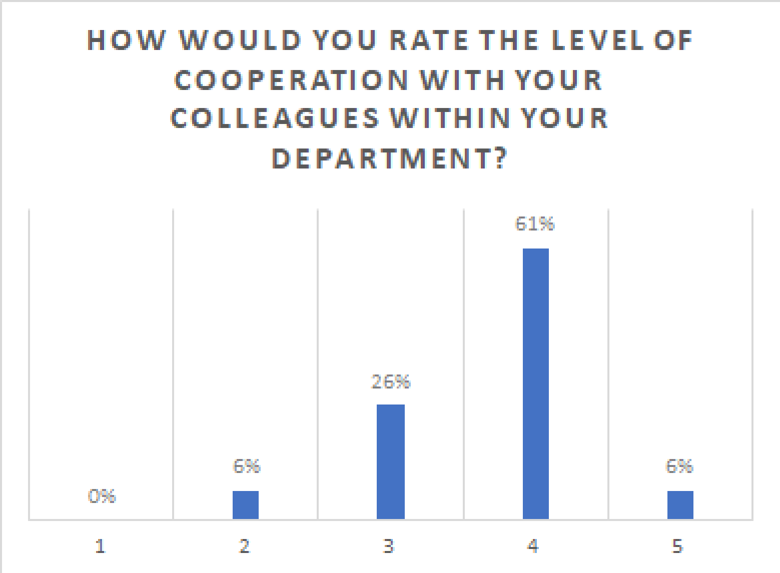

Figure 52, results from the questionnaire regarding the question “How would you rate the level of cooperation with your colleagues within departments?” and the answering range is from 1, “Not good” to 5, “Very good”.

4.2 Interviews

In this sub-chapter the results of the interviews conducted will be presented. As mentioned in chapter 3, the main questions asked during the interviews was; “how do you perceive the communication between departments?” and “how do you perceive the cooperation between departments?”. Further two often asked follow-up questions “is there anything else you would like to add concerning communication” and “is there anything else you would like to add concerning cooperation” was also asked. The interviews gave the investigators insight into the everyday work life of the employees. All results from the interviews have been translated from Swedish to English.

4.2.1 Organisational communication

The communication between employees and managers was a subject brought forward by many interviewees and many employees felt that it affected their motivation and enthusiasm. When interviewees were asked “how do you perceive the communication between departments?”, one respondent brought forward the performance and development review (PDR), that is done by managers with their peers to pass a checkpoint in the Organisations Manufacturing System. This PDR is to identify competency gaps of employees or improvement possibilities. Interviewee 1, who has been working at the organisation for more than fifteen years mentioned that the first time he had a performance and development review with his superior was in 2015. The employee mentioned that this created an uncertainty of what he should be aiming for, what goals to achieve both on a personal level and organisational level. Moreover, the employee said that:

"this lack of communication has really brought my motivation down."

Interviewee 3 mentioned that when starting at the organisation she had a PDR meeting with her supervisor on what she was supposed to accomplish and how she would get there. However, she has until this date not gotten any sort of feedback on her progress and if there is anything she needs to improve.

Additionally, it was mentioned by interviewee 4, that when a colleague within his department changed roles inside the organisation, the tasks that this colleague was assigned to had not been assigned to anyone else after the change. The interviewee explained that this had led to problems inside the department, because it had not been communicated by management that this change would happen nor who would take over his assignments. Further, the tasks that this colleague had were given to others in the department, who already had a lot on their hands.

When asking the interviewees if a scenario like previously described had happened to them, the majority gave a firm "yes". Another respondent recollected one time where one employee had changed his role and moved to another shift and the rest of the department were told one week later. The respondent said:

"The funny thing was that we found out about it accidentally. It was one employee from another shift that told us"

4.2.2 Email communication

Many interviewees brought to light the problems with using mail as a communication media. It was explained by interviewee 3 that communication between employees through mail is according to him a total disaster.

"I have at least a dozen mail each day in my inbox which does not concern me at all. It has come to the point that I try to use the internal mail as little as possible."

Interviewees mentioned that they had many unread mails in their inbox due to the massive flow of emails. Interviewee 4 explained that:

" Many employees add all of the employees in a certain department to CC in a mail, instead of sending it to the specific person that the information is intended for. Many of the employees here sort out emails that have them in CC to a specific folder and they do not even read them unless they are asked to."

Where CC stands for Carbon Copy and is a copy of email sent to another person for their information, and not necessarily for them to respond to.

Other interviewees stated that this has created a lot of confusion and it has come to a stage where they do not read mails where they are in "CC", because they think the content does not affect them.

According to interviewee 2:

"This overflow of information has caused problems, because sometimes important information is missed."

The interviewee continued and explained:

"At the current moment, when sending a mail, I must follow up what I have sent by going to the receiver and ask him to read his mail, just to make sure that the information has been received."

Interviewee 2 also stated that when there are article changes due to new design or specifications, it is uncertain who you should give information to. The respondents, further, explained that since there are three shifts working it is important that every team leader has this information. The respondent said:

"So, you send an email to the department manager, and you get no response on whether the email has been received, and you do not know if the information has been spread out to employees working on the different shifts."

4.2.3 Meetings

During the interviews, 5 out of 6 interviewees brought forward the meeting culture, which they think is an issue. They explained that when they invite other employees to a meeting, people do often not attend. Interviewee 4 told of occasions when one or two people have attended a meeting where 15 persons had been invited. Interviewee 2 mentioned that there have been occasions like this in the past and *"the most recent one happened a week ago"* where no one showed up to a meeting.

Continuing with the subject of meeting culture, interviewee 2 further commented that employees often show up to the meeting with their computers or telephones and are occupied with working in them during the whole meeting. The interviewee explained:

"this kind behaviour disturbs the flow of the meeting and communication."

The respondent further said that it also creates a negative picture of the person which has such a behaviour.

Another area mentioned in the interviews that is connected to the meeting culture is the problem with concurrently booked meetings. Interviewee 5 mentioned that:

"There are often days where I am invited to two meetings that are scheduled during the same hours. This has caused a lot of problems for me, because I cannot be in two places at the same time and I must attend these meetings, since the decision made there affects my work to a high degree."

When asked a follow-up question about this issue regarding double booked meetings and if it had happened to them, all respondents could bring up similar experience as that of interviewee 5. Interviewee 4 commented that:

"Sometimes you need to choose or prioritise which meeting to attend and when you do so, sometimes the meeting you chose does not generate any decisions making. Then you say to yourself, that was a waste of time and that you should have attended the other meeting."

Other issues regarding meetings that were brought forth by the respondents during the interviews, concerned the structure and effectiveness of the meetings. Most of the respondents stated that there is very low level of follow-up when it comes to subjects discussed during the meetings. As interviewee 1 mentioned:

"Not one person is communicating regarding the progress of what was decided during the meeting. A simple communication, such as we are behind schedule would help a lot."

Additionally, a common view among respondents was that they felt like the agenda and problems talked about during meetings was reappearing. Interviewee 5 stated:

"We are always looking into the same problems or subject during our meetings, it feels like somebody is pressing the rewind button every week."

4.2 Cooperation

When questions regarding cooperation were asked, most of the respondent brought forward that a change must be made in this area. Many of interviewees thought that the high workload was the reason for poor cooperation. As mentioned by interviewee 4:

"I have no time to put emphasis on cooperation when I am constantly occupied with new work and changed decision."

This was as well mentioned by interviewee 5, saying:

"I do not have time to cooperate with other employees or departments, due to the significant amount of work I need to finish"

One respondent mentioned that there is no time to conduct the work he is supposed to, because he is*: "constantly occupied with other employees' workload".* He further believed that this has its roots in the high workload at the organisation. When talking to interviewee 2, it was mentioned that the high workload had caused high levels of stress among employees, the respondent added:

"It would have been a wonder if the cooperation between departments was good. Of course, it is not working when people are stressed."

Furthermore, during the interview, interviewee 1 mentioned that there was a problem with one department taking material without notifying corresponding employees. Since the department in charge of managing material was not notified, the quantity of the material was not updated in the computer inventory system. This caused a production stop, since production had looked at the inventory system and saw that there was enough material. However, this was not the case.

Another subject often brought up in the interviews by the respondents related to employees' attitude towards cooperation. Interviewee 3 and 4 commented that all departments work with their own part of the process, and have no consideration on the bigger picture, and further explained that this has created many problems because:

"When a department is finished with their tasks and hands over the information to my department, I often get something that is not relevant to what I am doing. Due to this, I then need to get in touch with

the previous department or person in charge who sent me the information to tell them that they need to do rework because I cannot use it. This causes delays, extra work and non-value adding work"

The above-mentioned scenario was a theme that all the respondents touched upon. Many interviewees stated that there is a "it is not my problem anymore" culture. On respondent told the interviewers:

"People have the mindset of what can others do for me, but not what can I do for others."

Moreover, most respondents mentioned that seeking assistance or getting help from other employees is hard. When they need help it is uncertain to whom they should go to and sometimes when they find the correct person, that person reacts in a bad manner or states that he or she does not have time to help. Most of the interviewee stated that this has led them to not seek help or assistance when they need it during, e.g. decisions making or problems that have occurred.

In addition, all respondent stated that it is unclear from their perspective who oversees what. It was expressed by interviewee 1 and 2, that there is uncertainty regarding what the different roles are within another department. Many of the interviewees said that the system where you can look up the different roles within the organisation does not reflect the reality. This was something the respondents thought affected cooperation in a negative way and as one of them said:

"Once I needed to have a certain information regarding a product from one department, so I went to the person which was said to be in charge of the information I needed. However, when I went there in pursuit of getting the information, the individual told me he had nothing to do with that product"

The respondent further explained that it took his almost a full day to locate the individual that could assist him. The respondent continued and said, situations like this make people less positive towards cooperation and it is not easy to cooperate when there is no basic structure or system to support it.

Lastly, when the interviewees were asked how they perceived cooperation, most respondents commented on group feeling and teamwork both between departments and within departments. Many respondents stated that it is noticeable that some departments have a good group feeling and teamwork inside their department, but it does not apply across department borders. Interviewee 5 commented that:

"On an individual and in some cases group level cooperation is working, however on the organisational level everyone pulls the rope in different direction"

When asking the interviewees what they believed might be the root cause of this. All the respondent directed their critics to management. One respondent said: *"we do not have any activities where we bond with other employees"* and another respondent mentioned:

"Top management only cares about the numbers not being minus, as long as this is achieved, they are okay with the situation. They do not invest in activities to bring up the morale or to bring employees closer to each other. The lack of engagement is astonishing."

Continuing with this theme, many employees brought forth that when the departments achieve good results, there is no kind of celebration embracing what has been achieved. Most respondents said that there is not anything encouraging cooperation and therefore employees do not put emphasis on it. Interviewee 5 commented:

"It is nice to be recognised sometime, it helps with your confidence and it is an acknowledgement that you have done something good. It will encourage me to do it again."

4.3 AIM sessions

In this part of the results, findings from the AIM sessions are put forward. In all the AIM sessions, through discussion and arguments, the groups created 2nd level groupings touching upon subjects related to communication between departments. These level groupings are the same as discussed in the theory chapter. As it is an essential part of the AIM session, the participants voted on those subject that they believed would answer the question of why there is a communication problem between departments. All Post-Its and the final concluding sentences answering the questions from each workshop session is presented. The four AIM sessions will be presented as first, second, third and fourth AIM session and thus hiding the name of the department participating to ensure anonymity of the participants.

The different figures in this chapter illustrate the final layout of the different AIM sessions. The arrows between topics or groupings illustrate which topics or groupings affect other topics or grouping. Further, the coloured marks represent points, Red = 3, Blue = 2 and Green = 1. Moreover, the different shades behind each 1st level grouping represent the first, second and third most important topic which the attendees believe is the root cause to the communication problem at the manufacturing organisation. The importance of the topics was decided by the amount of points held. A red colour shade represents most point and the most important topic to investigate according to participants, a blue shade represents the second and a green shade the third most important topic for investigation.

4.3.1 First AIM session

This first workshop had to be rescheduled once. Eight employees from the same department were invited, one respondent to the invitation by accepting it. Initially there were five participants at the AIM session, but all of them arrived late. Ranging from five minutes late up to fifteen minutes late. Furthermore, one of the participants brought a computer to the session and when the participant was told to close the computer and only focus on the AIM session, the participant decided to leave due to having too much to do and not being able to put in the effort needed. The investigators felt resistance from employees to participate in the workshop and when reminding the employees invited to both read the AIM-handbook and to accept the meeting invitation, most of them replied by saying that they did not have time for this. Others said that they did not see the use of this kind of session.

The session started with a brief explanation of the AIM session to remind the employees of the steps and tasks ahead. This step could have been skipped if the group had prepared as was asked of them. Only one of the practitioners had prepared by reading the AIM-handbook sent to all employees.

During the warm-up step, participants explained what they thought were causing communication and cooperation problems at the organisation. After approximately 5 minutes the participants were ordered to begin writing the Post-Its which would be put on the whiteboard. Many topics were touched upon, e.g. resources, workload, insufficient communication flow, organisational processes, responsibility, key persons, information processes, education and increased requirements. However not all of them were in the final layout of the AIM. Following this, the participants with help from the investigators went through all Post-Its to clarify the meaning of them. There was a lot of discussion regarding the various topics on the Post-Its generated by participants and some Post-It's were removed because they were like existing ones or that they were not answering the question asked.
Figure 13 shows there were 21 Post-It's in the final layout of the AIM, but the total number of Post-Its including those removed was 24. The chosen Post-Its created seven 1st level groupings (Red Post-Its) and one 2nd level grouping (Blue Post-Its).

Many participants commented that there is lack of internal routines within the organisation and there is unclarity when it comes to knowing who oversees different processes and assignment. Further it was brought up that routines such as taking care of delivery notes, packing bills and material handling is ambiguous and unclear. Also, there are different views on who should do what within departments. These comments and the relevant Post-It's were put under the 1st level grouping ***"Internal routines and responsibility creates poor communication"***. This 1st level grouping got two votes, two blue marks resulting in 4 points, which was the second highest points of all groups in the AIM.

The other heading with same amount of points and votes was ***"Management is not listening".*** This 1st level grouping got one red mark and one green mark. Here participants wrote and commented that decisions are made without any consideration to employees. The participants explained that a decision is made, and we must just follow without knowing the end game. Also, under the same 1st level grouping participants put forward that there are many key persons in the different departments and when they are sick or not available the information flow stops to several processes.

Other 1st level grouping that got votes were ***"Organisational goals and processes are uncertain"*** and "***There is a very high level of workload"***. In the former a participant brought forth that organisational goals need to be broken down and communicated to give employees a better understanding of what is expected of them, that there is a lot of talk and no action, as well as, no decision making and that the allocation of tasks and assignment is uncertain. The latter 1st level grouping touched upon the high workload within the organisation and that it does affect communication in a negative way and that it creates a lot of confusion among employees due to time restraints and high level of stress. One participant commented that there is no time to finish assignment and tasks. Moreover, in the first AIM session there was one 2nd level grouping, ***"Increased requirements leads to higher workload which cannot be supported due to lack of resources".*** In this grouping there was three 1st level grouping (see figure 13).

Finally, the 1st level grouping in the first AIM session which got most votes and point was ***"Limited resources for tasks and assignment, e.g. workforce and planning"***. It got six votes and 14 points. Themes that were included in this 1st level grouping firstly highlighted problems with available resources which do not cover the workload, thus leading to less emphasis on communication. Secondly, it brought forward the lack of planning regarding who oversees what, which results in tasks and assignments being left alone or put aside. Lastly, problems concerning unfinished assignment, where new assignments are given without the old ones being completed.

Moreover, in step 7 of the AIM, participants used arrows to show the relationship between the different groups, both 1st and 2nd level grouping. In figure 13, it is shown how the participant place the arrows to show cause and effect relationships. As shown, four 1st level groupings are affecting the 2nd level grouping. After this was completed the participants made the final layout (see figure 13) of the AIM to get a better understanding of the connections. Following this the participant created the concluding sentence, which included themes from the three groups with most points, to answer the questions put forward by the investigators. The concluding sentence from the first AIM session is:

"Decision made by top management without a dialogue with departments causes uncertainty on deliverables, employee roles and process handling between departments, resulting in increased demand and higher workload on available resources, thus having damaging effect on co-operation."

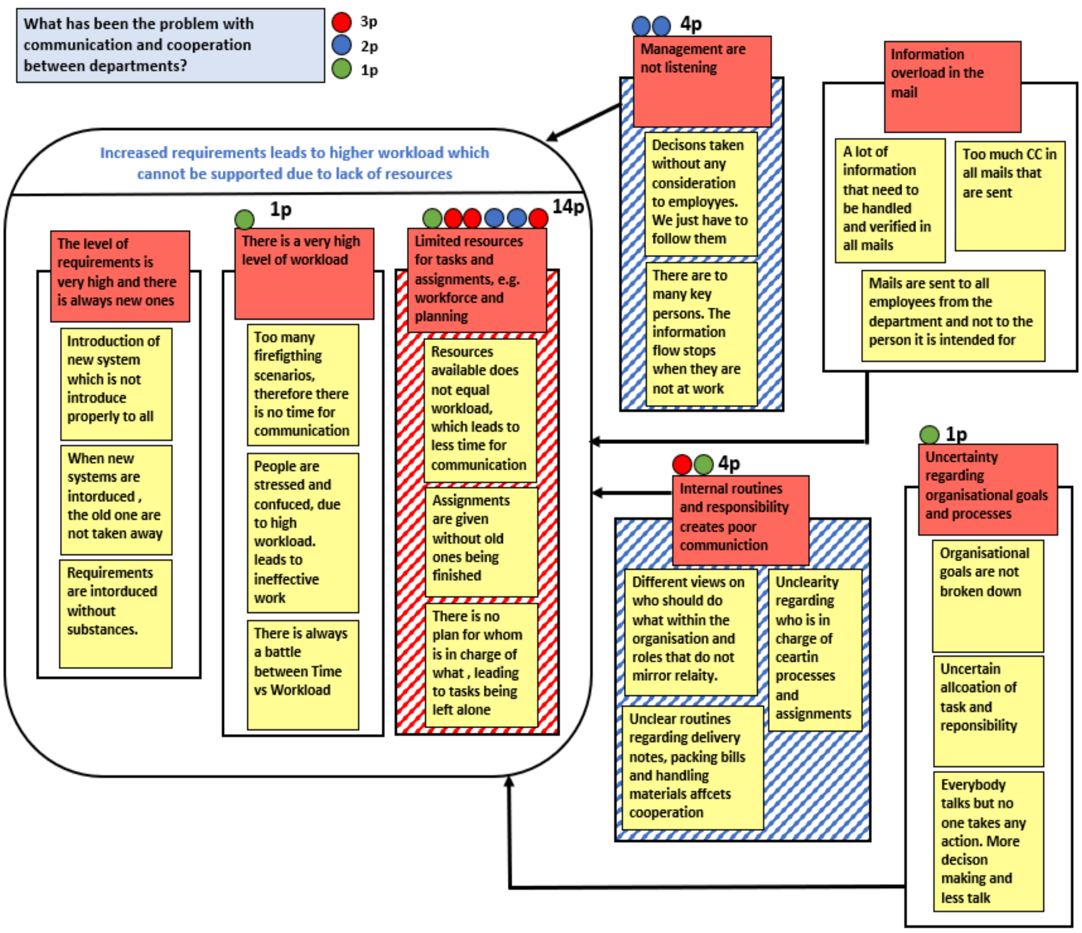

Figure 13, results and outline of the first AIM session

4.3.2 Second AIM session

For the second AIM session eight persons were invited and four of them made an appearance. However, before the session two of the employees said that there would not be able attend due to their high workload and we discussed together with the other two attendees about cancelling the workshop. After 5 to 10 minutes, two other employees showed up during our discussion. Although it was communicated that no electronics devices would be allowed, one employee showed up with two phones and one computer but did not use the gadgets throughout the workshop.

As in the workshop prior to this one, the workshop started with a brief explanation of how the session would be conducted and what was going to be done in each step. No one had read the manual prior to the workshop. After the introduction to the AIM, the question was presented to the participants.

During the second step of the AIM session the attendees gave their perspective of what they believed was the problem behind the communication and cooperation problems in the organisation. Topics lifted forward concerned planning, long-term thinking, resources, different levels of communication, job description, team feeling and more (see figure 14). The participants made Post-it and with assistance from the facilitators clarified the meaning of those written Post-Its. In total a little more than 30 Post-It's were created, but in the end, there were 28 left, due to some of them having the same meaning with different wording. All the Post-Its are displayed in Figure 14. The AIM instruction manual recommends having between 19 -24 Post-It's for the AIM but the participants commented that they could not remove more Post-Its because otherwise would not show the full picture of the problems within the organisation.

In the second AIM session, the topic that got third most point (4 points) by the participant was ***"Reactive work before proactive way of working"***. The attendees commented that long-term planning and thinking is missing within the organisation and that this causes poor levels of cooperation between departments. Additionally, it was put forth that an operative way of working is apparent today and that this is also one cause to the problem. One attendee mentioned that there is no strategic thinking, people look at today and not tomorrow.

Furthermore, the second highest points (5 points) were given to the 1st level grouping "***Unclear job description"***. Under this heading, participants brought forward problems with follow-ups on decisions made, stating that *"we do not know if we have done a good job or not*". Under the same 1st level grouping, the participants had uncertainty regarding who oversees the different assignments and processes. The attendees mentioned that when something unexpected happens people must know to whom to turn and who can be of help. Regarding uncertainty, one participant mentioned that *"there are occasions when you step into someone else's job and that can create a grudge between employees"*. Another topic mentioned was the way of working, participants mentioned that *"we are always looking for the best practice"* and that there is never a moment where they analyse how work is conducted to make improvements instead of always looking for new ways. Both 1st level grouping with third and second highest points in the second AIM session was place in the 2nd level grouping **"Reactive way of working and unclear job description"**.

Other 1st level groupings that received points was ***"Motivation"*** with 1 point. This topic concerned the low intrinsic value employees have and that there are no initiatives pushing the employees to do more. ***"Lack of ownership at the organisation"*** received 3 points and covered subjects such as people being unwilling to take more responsibility and lack of ownership of assignments, as well as, the problem with the increasing culture of *"It is not my problem"*, which according to the participants is affecting cooperation between departments. The participants mentioned that once a department hands over a task or assignment to another department it is not *"my problem, even if the problem was initially caused by* *my department"*. The 1st level groupings that did not receive any point related to the internal communication which covered meeting culture. Employees often invited people to meetings where no one would show up, even though they had accepted the calendar invitation.

Moreover, the 1st level grouping with most votes and points was ***"Lack of competence creates ineffectiveness"*** and it had 5 votes and 11 points. Under this heading the attendees choose Post-Its which commented on the lack of competence apparent in the key roles within the organisation. Further, the attendees mentioned that there is no internal education organised by the organisation which employees can take part in, which according to the attendees affect the competence level in the long run. The lack of competence within the organisation is as well due to the organisation hiring employees from the factory floor according to the participants. They mentioned that this does not mean people on the factory floor are incompetent, the problem is that they do not get the comprehensive introduction needed from white collars to carry out their new job. One mentioned that it only creates more work for the other employees, because we need to help the new employee with his or her job the first four months. Another topic discussed was that there is no organisational handbook. An organisation handbook is a manual including ***job and process description, roles and rules which must be followed by employees. According*** to participant such a book would help boost cooperation and communication.

Looking at Figure 14, it is possible to see that the attendees choose the 2nd level grouping ***"Resources and competence must be assessed"*** as the one that is affecting all the other 2nd level groupings. While the 2nd level grouping ***"No structured routines for communications affects communication between and within departments."*** is the one that is affected by most 2nd level groupings. After connections were drawn and a vote were conducted the final layout was completed. Lastly, the participants created a sentence to answer the questions asked by the instructors.

The concluding sentence from the second AIM session is:

"Lack of competence and resources, as well as, unclear job description leads to people working in a reactive way which in the long run will have a negative impact on communication and cooperation."

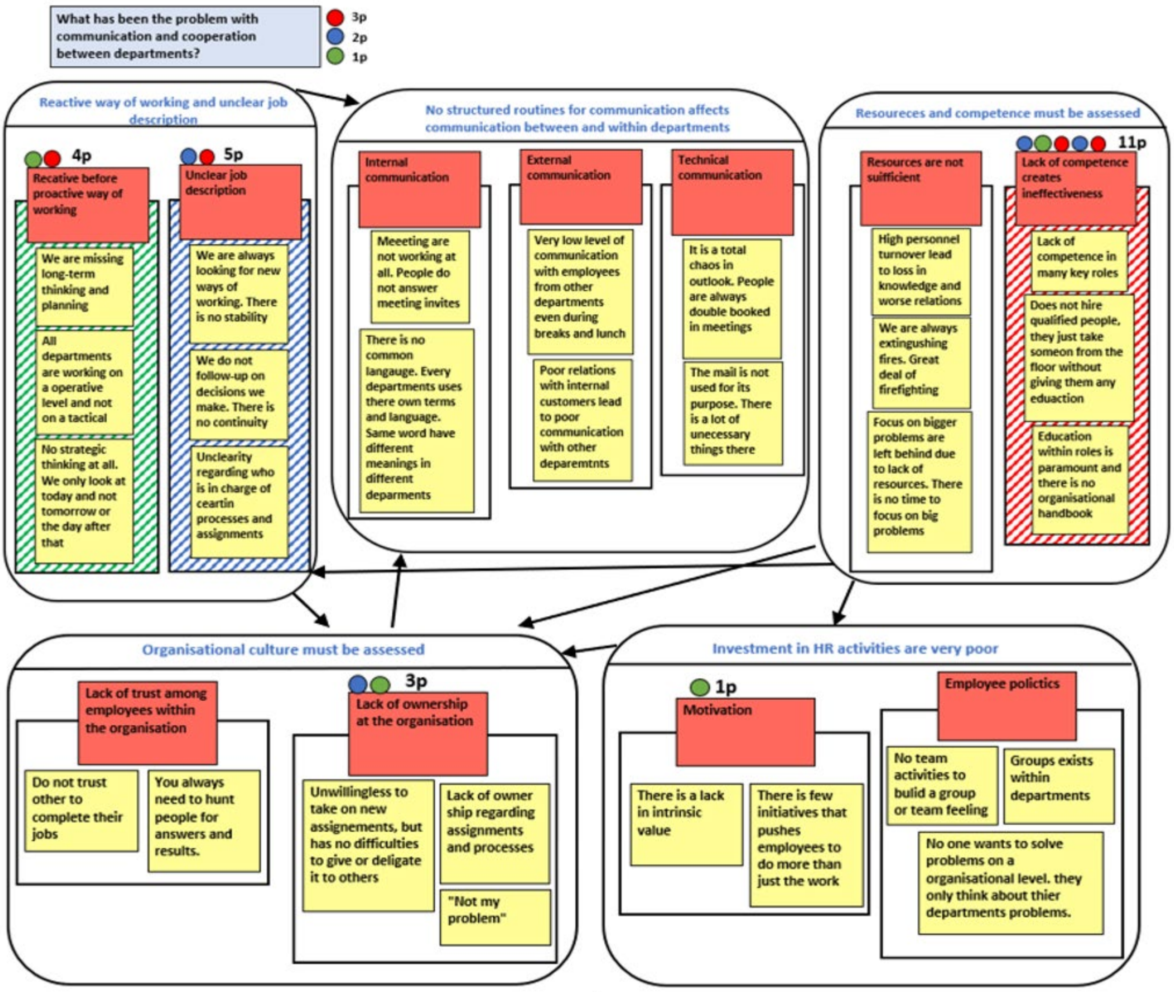

Figure 14, final layout of the second AIM session

4.3.3 Third AIM session

This workshop was rescheduled twice due to invitees not having answered the calendar invitation or not being able to attend. When the workshop was conducted all attendees arrived on time and the workshop was started on time. During the first minutes it was noticeable that the participants wanted to point out everything they thought was wrong or poor at the organisation. The participants urgently wanted to discuss everything that was on their mind and the participants commented that no one had listened to anything they had to say for a while and that now was the time to turn the table.

During the warm-up discussion the participants touched upon matters they believed were the root causes for the situation today. One attendee brought forward that they receive information late or not at all and that the information they need for doing their job in the best manner is missing. Other topics discussed concerned who to contact to gain information, job descriptions, lack of team feeling across departments and what is expected of the employees. After the warm-up, attendees started to write Post-Its and later they were clarified for the rest of the participants to create an understanding of what was meant by each Post-Its written.

The total amount of Post-It's in the final layout was 19 with six 1st level grouping and two 2nd level grouping was created in the AIM. In this AIM session the participants gave the third highest points, 3 points, to the 1st level grouping ***"Work structure and way of working needs improvements"***. Participants brought forward the problem that there are always new directives coming from top management, which leads to the current tasks and assignments being abandoned. A participant commented that these new directives often causes problems which later creates firefighting scenarios. Additionally, a lack of process maps to the processes, especially applicable to those processes that do not work. This was highlighted as a problem affecting cooperation between departments, as well within departments. Together with this two mentioned Post-Its, the attendees also had a Post-It related to who should be responsible of reporting problems. The attendees commented that the responsibility of reporting problems should be on the problem owner and not the customer of the problem. An attendee explained that *"If I am the process owner, then I am the owner of the problem and therefore I must report the problem"*, this was agreed by all participants in the AIM session.

The second highest points awarded was to ***"People must take responsibility"*** with 7 points. The Post-It's under this heading covered topics regarding employees being uncertain and confused about their responsibilities, according to the attendees this is one of the main problems at the organisation. Further, employees being occupied with unnecessary and non-value adding activities was another Post-It under this heading. It was mentioned in the AIM session by the attendees that employees easily lose focus and start doing other things not related to the work that needs to be done currently. In addition to the previous mentioned topics under ***"People must take responsibility",*** the absence of leadership was brought to light. Explaining leadership, the participants said that people do not know who the leader is and there is no clear leader to follow.

Finally, the 1st level grouping that received most points, 8 points, was ***"Job description"***. The themes of ambiguous job descriptions and seeing the bigger picture could be allocated under the heading ***"Job description"***. The latter is related to employees having a tunnel vision, which the participants explained as when people only see their own problems and not the bigger problems affecting all departments. It was mentioned by the attendees that people are very fast closing all doors when they have a bit of problems and being out of reach to help with bigger problems. The former, according to the attendees, must do with people not knowing what the role they have entails. One attendee mentioned, *"It took 3 months until I had a moderate understanding of my role and what it entailed"*. Moreover, Post-Its targeting the issues with people improvising to complete assignments was also included under the heading ***"Job description"***. Improvisation is happening because there are unclear and ambiguous job descriptions at the organisation according to the participants of AIM session 3.

Besides, the previously mentioned high scored 1st level groupings, the participants described that there is no team feeling inside the organisation. They stated that this lack of team feeling inside is apparent when they seek for assistance. They call someone or send an email, but no one answers. Another issue highlighted in this AIM session related to when employees bring forward problems or possibilities of improvements. The participants stated that one needs to *"beat around the bush"* to not offend the persons receiving this information.

Lastly, the attendees believed that the 2nd level grouping ***"Poor work structure and ambiguous job description"*** was the villain affecting all other groupings in the AIM. The victim of this AIM was believed by the participants to be ***"Uncertainty and negativity creates poor relations"*** which was affected by all other groupings by the attendees. After the connections were drawn, the concluding sentence could be created:

"Unclear and ambiguous job descriptions together with a poor work structure affects people's understanding of their responsibilities negatively, which in turn contributes to low levels of cooperation and communication between departments."

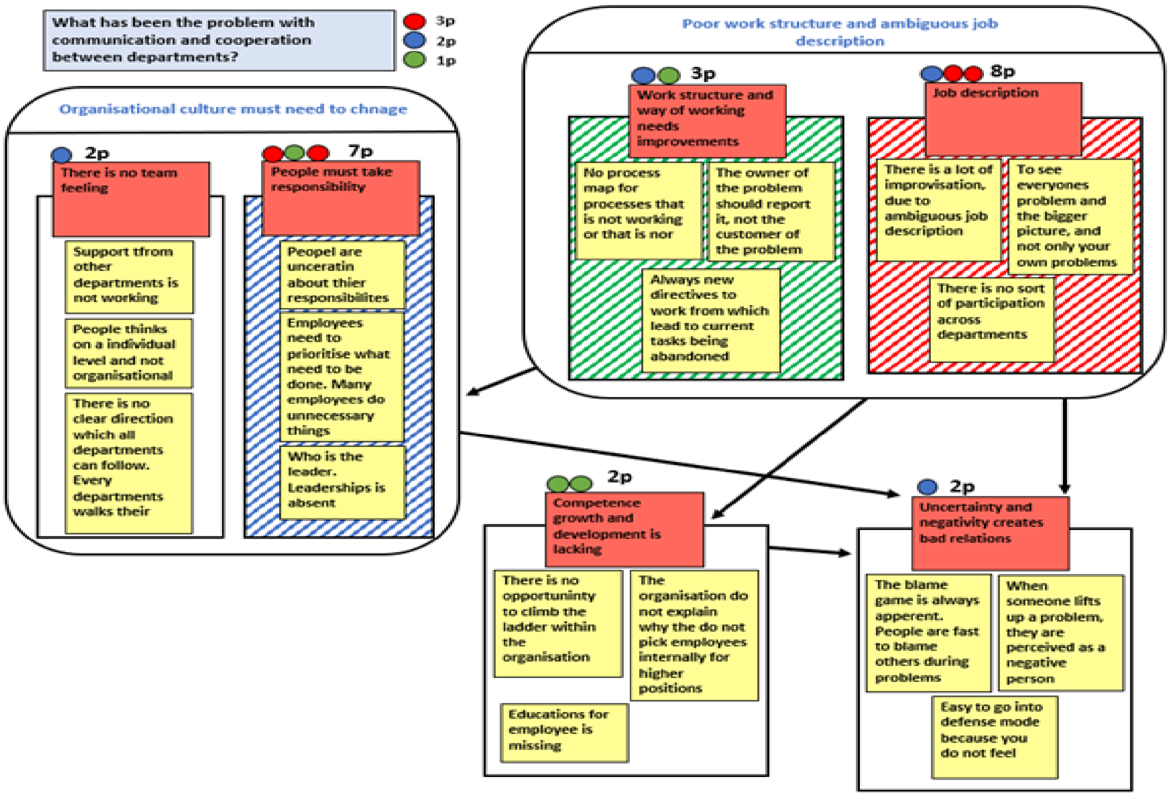

Figure 65, results and final layout of the third AIM session

4.3.4 Fourth AIM session

For the last workshop, out of eight employees invited, five out of eight employees did attend, and they all showed up on time. As experienced from the other workshops, some participants of this last AIM session had brought their computer with them, explaining that they needed to have it present in case there would be an emergency. This AIM session was not rescheduled and there were no problems get people to attend. In this session, all the participants had taken the time to read the AIM-handbook sent to them prior to the workshop. Therefore, more focus could be put on conducting the AIM session.

During the warm-up step many valuable points were brought forth which the participants believed were causing problems. A common view among the employees participating in this AIM session was that cooperation was lacking due to unclear job description. As one participant said, *"if I don't have a clear picture of my role, I am more likely to not cooperate."* Because it would mean that I am more likely to be "incompetent." Another problem that was brought forward concerned process knowledge. Participants stated that the knowledge of the processes, as in what should be done if something happens or if there is a need for changes, is very low. Other topics presented during the AIM session related to decision making, feedback and information, attitude aspects and the lack of proactive way of working.

Following the warm-up, written Post-It's were collected and clarified by the attendees. The total amount of Post-It's in the final layout was 32, with eleven 1st level groupings and five 2nd level groupings, see figure 16. Although the participants were told that it is recommended to have between 19-24 Post-Its, they argued that an opportunity for them to be heard such as in this AIM session might not happened in a long time, therefore it is important to highlight the aspects affecting communication and cooperation.

After the participants had grouped the Post-Its, they began discussing the cause and effect relationships between the different groupings and after a long discussion between participants the connections could be made, see figure 16. They believed that the 2nd level grouping ***"Reactive way of working and lack of resources, people and time has a negative impact"*** was the villain affecting all other groupings. Further, the victim in the AIM was ***"Poor role and job description is contributing to a bad attitude towards work"***

When the connections were drawn and the final layout set, attendees voted on 1st level groupings they believed were the root cause of the problem and which needed more attention and investigation from top management. The third highest point was given ***"Hierarchy, we do not follow chain of command"***, which according to the attendees concerned the unclarity of knowing who is in charge, one attendee commented *"I do not know who drives this bus"*, by bus the attendee meant the organisation. Another Post-It described the responsibility, should I lead, or should I delegate. This uncertainty has according to the attendees created confusion among employees resulting in low participations in the processes and assignments. In relation to participation within the organisation, attendees of the AIM session brought forward that people who do not participate are usually quick to point out what others have done wrong.

The second highest points in the workshop was awarded ***“Knowledge about the processes”*** with 5 points. Here participants pointed out that there is low knowledge and poor understanding among employees regarding the different processes at the organisation. They commented that they do not have 100 % understanding of other departments processes, which is bad. Since they are involved in the same process of producing a certain product. One attendee said *“it would be good for cooperation and communication, if I had knowledge about the other departments. Not only can I deliver my part of the process better because I know what the department I handover to, needs from me, but also that I can be part of the process all the way to finished product”*. Moreover, a great deal of discussion about team work was conducted and therefore a Post-it regarding teamwork and groups working together within departments was also put under ***“Knowledge about the processes”***. According to the participants this was done to emphasise that there is poor teamwork and group feeling between departments and that it relates to poor knowledge of the processes.

Finally, the 1st level grouping awarded most points, 10 points, see figure 16, was ***“Shortage in resources, people and time”***. Participants brought to light issues concerning some employees having too many responsibilities and the attendees mentioned it has negative effect on the hand-over of assignments and tasks between departments. One attendee mentioned that when an employee with many responsibilities is sick or not available at work the processes that employee is responsible of stops, explaining that no one else has the knowledge to run those processes. Furthermore, issues concerning bad resource planning was discussed. Participants thought better planning of resources must be implemented, since as of today the resources available do not help employees to reduce the workload. They also believed that this was of the main reason why cooperation is low. One attendee commented that *“High workload for me means that I close my doors in the room and just work.”* Continuing, the topic of workload, the participant also brought forth in the Post-It *“Always time pressure, there is no foresight”*, that there is a lack of long-term thinking which contributes to time pressure and firefighting at the organisation.

Lastly, the participants created the concluding sentence by using the three 1st level groupings with most points to answer the question presented by the instructors. The concluding sentence in the fourth AIM session is:

” Unclear and poor process knowledge contributes to employees conducting work in their own way without any consideration to chain of command, which has its roots in the lack of resources, people and time available at the organisation.”

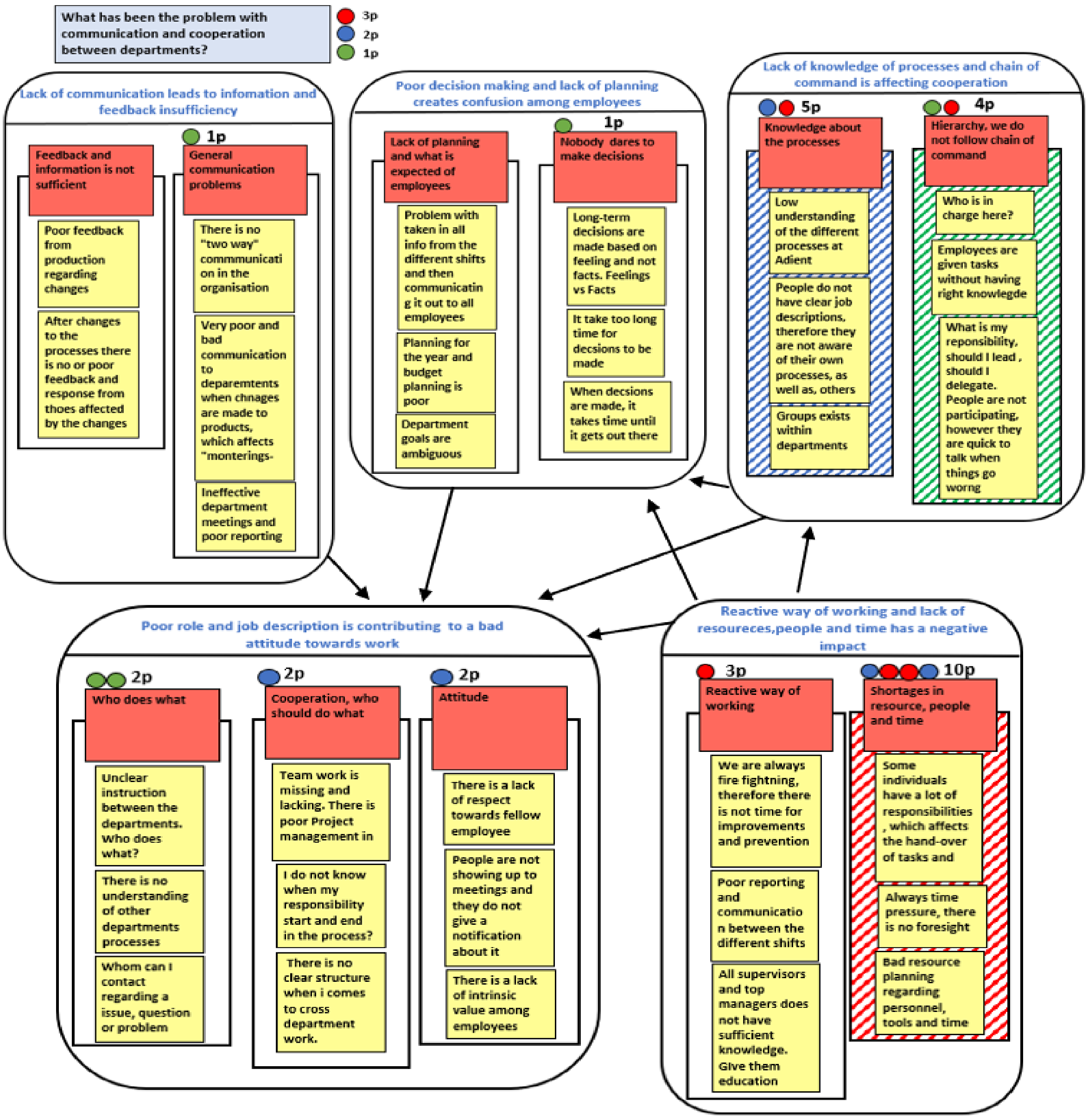

Figure 76, results and final layout of the third AIM session

5 Analysis

In this chapter we will consider the data collected from the questionnaire, the interviews and the AIM sessions. The analysis is guided by research question one and thus the topics that have been chosen for analysation are the ones related to communication according to the investigators. Then each topic is divided into problem areas and in those the first research question, what are the underlying factors causing intra-organisational communication problems between departments in manufacturing organisations? will be answered by showing how the current situation is according to the three data sets.

5.1 Communication channels

In this chapter the findings that relates to Email communication and Meetings are compared.

5.1.1 Email communication

The questionnaire had one question regarding the level of communication in the organisation, which was rated quite low, 55% rated it as poor or very poor. This can be related to email communication and the massive overflow of emails on daily basis, or unnecessary email communication is poor communication. But it is too broad of a question to state that this connection is real.

The mail culture was discussed by many employees in the interviews. During the interviews it was mentioned that everyday many of the employees receive so many emails that the employees are not able to read them all during their workday. It was also put forward that this has led to that important information is missed due to the receiver not reading his mail. It was put forward that the sender follows up on emails by physically going to the receiver and ask him to read the mail sent and react to it. Some of those mails do not even have information that is relevant to their work. This massive flow of emails is according to the interviewees due to a certain "CC" culture and that all information is sent to everyone due to either some processes missing or rules regarding who to put in CC are missing. This culture of having a lot of persons in CC has led to that many persons sort out emails that they are in CC into a separate folder and they do not even read them unless being asked to. This may imply that the receiver does not get necessary information in time or does not react to the information given.

During the AIM sessions there were mentioning of not knowing who to contact in case of this or that happening. So those persons just sent the information to everyone and hoping for someone to catch it and answer it and that those emails are often sent to everyone but the person it should be sent to. And thus, including a lot of persons in the email causing overflow of information for some employees. Connected to this was the mentioning of uncertainty regarding who oversees different processes and assignments. It was also mentioned during the AIM sessions that there were a lot of unnecessary email communication making it impossible to read all emails and that many emails had a lot of information that needs to be handled and verified. While other participants stated that they receive information too late or not at all so that they cannot do their job in the best possible manner.

When comparing the findings from the questionnaire, interviews and the AIM sessions it shows that there is a problem with email overflow inside the organisation where everyone is added in CC, even if the subject is relevant for those persons or not. This unnecessary email overflow may induce stress because of all the unread emails on daily basis, which can lead to employees becoming unhappy with the daily effort because they cannot manage to complete their work. This situation can also create a feeling of high workload inside the organisation. This also possibly leads to that the person receiving the email seems unwilling to cooperate or does not want to communicate with the sender.

5.1.2 Meetings

In the questionnaire the investigators asked three questions regarding meetings, theses can be seen in figure 7, 8 and 9. The first one was “On average how many hours a week do you spend in meetings”. 42% of the respondent answered on the range between 1-4 hours a week, 23% answered 5-8 hours a week, 16% answered 9-12 hours a week and the rest were scattered on the range between 13 hours and 38 hours a week. According to these results, the average employee spends time of each working week in meetings. Making a good use of the time spent in meetings every week is of a high importance, i.e. to ensure there is a real value added for the employees and the organisation. The second question regarding meetings was “Do you find the meetings effective?” where most of the answers are towards the lower spectrum of the answering range, where the answers 1 “not effective at all” (8%) and 2 (38%) stood for 46% of the answer. 33% of the respondent answered a 3 “OK”, where 19% answered a 4 got and 6% a 5 “very effective”. In our opinion the answers indicate that most of the employees do not find meetings effective at all and that there is room for improvements. The third question related to meetings was “Do you prepare yourself for meetings?” were the majority (74%) stated that they prepare themselves for meetings and the rest of the answers were either “No” or “Yes, if required from the moderator”. What is interesting is that the results from questions in figure 8 and 9 contradict each other. While the employees prepare for the meetings, they still do not find them effective and if they feel that the meetings are ineffective then the time, they spend each week in those meetings is wasted.

During the interviews the meetings were touched upon by many of the interviewees, some of them even stated that it was the root cause of the communication problem. It was stated that when employees hold meetings, either no one replies to the meeting invitation or those that responded do not attend, this was also touched upon during the AIM sessions. There it was stated that employees held a meeting, and no one showed up even though they had accepted the calendar invitation and if they then cannot attend there are no notification sent regarding that. Furthermore, it was also stated that when they show up, they do so with their computers or telephones and are occupied during the whole meeting. The investigators experienced this during the AIM sessions, some employees showed up with their computers and telephones and had to be asked to put them aside. This can correlate to the findings regarding ineffective meetings from the questionnaire as the meeting cannot be effective if the employees attending are mentally absent.

Moreover, it was interesting to hear that many of the employees receive calendar invitations to meetings that are held concurrently by different employees. So that the one receiving the invitation needs to prioritise what meeting he or she should attend, it was even stated that the Outlook calendar is a total chaos, people are always double booked. And in some cases, both meetings are of high importance, since the one invited needs to participate in the decision making during the meeting or even make the decision. The investigators also had a fair share of this through the AIM sessions, in most cases no one had replied to the calendar invitation which the investigators had to set up or they had booked themselves up on other meetings at the same time. What can be clearly seen is that meetings cannot be effective if the correct persons for the decision making do not attend, as well if no one answers the calendar invitation and there is no possibility to reschedule, then one can only attend the meeting and hope for the best. This view of ineffective meetings was echoed by the interviewees which stated that they are always considering the same problems or subjects during meetings and that no one reports any progress of what has been decided during the meetings. This was underlined during the AIM sessions where it was stated that everybody talks but no one takes any action.

The information around meetings which has been gathered underlines that the meetings are perceived ineffective. Further it has also been commented by employees during the interviews and the workshops that it affects performance negatively and creates confusion among employees. It must be noted that the employees do not spend much time in meetings on average every week. That could be connected to that the employees perceive that the meetings are ineffective and thus perceive like they spend more time in meetings than they actually do. The negative view on meetings can as well be compared to figure 10 ”how would you rate the level of communication in the organisation”, where the majority

5.2 Cooperation

In this sub-chapter a data analysis of the cooperation inside the organisation is presented, categorized related to the different cooperation areas.

5.2.1 Cooperation between colleagues

In the questionnaire, two questions regarding cooperation between colleagues were brought forward, one regarding cooperation between colleagues within departments and the other regarding cooperation between colleagues from other departments. The cooperation with colleagues within each department seems to be working as the majority (61%) rated the cooperation as a 4 “good”. When considering the cooperation between colleagues from other departments the rating was unclear, the answers were distributed quite evenly around the mid-range and 32% voted the cooperation as 2 which would be stated as not good. Moreover, 32% rated it as a 3 and 29% as a 4 “good”. This indicates that cooperation is perceived to be functioning between departments. However, through deep analysis of the interviews and AIM session several problem areas regarding cooperation emerged.

Several points regarding cooperation were brought forward during the interviews. It was brought forward that they did not have time to put emphasis on cooperation as they were occupied with new projects or activities constantly. That due to the huge amount of work needed to be finished, they did not have time to cooperate with other employees or departments. There were also mentioning that cooperation was working on the individual and sometimes group level. However, when it came to cooperation on the organisational level, it sometimes felt like everyone was going in the opposite direction.

During the AIM sessions it was touched upon that there is no team feeling inside the organisation. This team feeling can be found within certain group of employees but not on the overall level and that people most often think on an individual level and not organisational. It was stated that this makes it hard to get help regarding problems and that this often makes it feel like that certain employees’ hand over problems like they are a hot plate instead of asking if they can help with the problem to figure out a solution. This lack of team feeling was apparent in that the blame game is apparent, that it is easier to blame someone for problems rather than helping those persons with the problems at hand. And that due to this lack of team feeling there was a lack of trust on that certain employees would finish tasks or projects that you need to hand over to them.

Connected to this it was stated that there is a certain lack of ownership of certain processes This lack of ownership made it hard to know if you were asking the correct person in the other departments and that if needed to hand over problems, you were not sure if the person did even care if this problem was fixed or not. It was also mentioned that due to unclear job description it was hard to cooperate because the person that has the unclarity of what he or she is supposed to do he or she will be afraid of doing tasks.

It is apparent when combining the result and analysis from the questionnaire, interviews and AIM sessions that the cooperation inside the organisation is lacking. This can be due to the communication problems and or the lack of team activities mentioned by the employees.

5.2.2 Job description

In the questionnaire the question "Do you work according to your job description" was asked and the results were astonishing. Apparently only 26% of those that answered the questionnaire work according to their job description and another 26% do it sometimes. The rest of the answers are equally spread between "No", "I do not know my job description" and "I do not have a job description".

In the interviews it was mentioned by one interviewee that he was constantly occupied with new work and changed decisions. This could indicate that this employee does not work according to his job description because the new work is not according to his job description. Another employee mentioned that he was constantly occupied with other employees' workload, which gives the same indication as the before mentioned.

All the interviewees talked about the uncertainty of who does what inside the organisation and that sometimes it took a lot of working hours to locate some persons that are responsible for certain aspects inside the organisation. This also indicates that employees do not know the job description of other employees, which in turn makes it hard for them to locate the correct person for decision making.

In the AIM sessions it was brought forward that there is uncertainty regarding who oversees different processes and assignment. Uncertainty on deliverables and employee roles was also put forward, that there is little knowledge of who should do what and deliver certain things and this was possibly due to the employees having unclear job descriptions. Thus, that they do not know their own processes nor others. And due to this uncertainty, there was a lot of improvisation done to be able to finish what they think is their job to do.
Lack of ownership at the organisation was also discussed, that the internal customer is often reporting problems, but it should be the other way around, that the information should be given prior to the problem happening.

These findings all seem to correlate to the fact that the unclear job description or lack of job description makes it hard for the employees to do their job in a considerable manner or that the workload per person is too high. It could also lead to that as mentioned by some of the interviewees that certain employees are constantly doing other employee's jobs which can lead to that certain employees become stressed out. It has also been mentioned several times throughout the findings that employees perceive the workload to be too high. This correlates to these findings due to the employees accepting certain work tasks that they should not even be doing.

6 Discussion

In this chapter we further discuss the topic discussed in analysis. Improvement ideas are put forth, which could improve the poor communication inside the organisation. The spotlight is on different subjects which can improve intra-organisational communication.

It is important to note that communication is not only a simple transfer of information between employees, it also affects how employees perceive their daily work, their job satisfaction, their motivation, commitment, energy and efficiency (Littlejohn, 1989). Disruption to communication can have a negative impact on the functioning of the organisation and therefore it is vital to have the communication channels as effective as possible (Eunson, 2012). According to the analysis there are potential areas of improvements in communication and the improvement ideas put forward are mainly aimed at previously analysed areas of communication. The improvement ideas will thus answer the second research question, *what recommendations can be made for improvements of intra-organisational communication at manufacturing organisations*?

6.1 Mail communication

From the analysis it is apparent, according to the employees, that the efficiency and effectiveness in the mail communication is lacking. There are too many emails sent every day and too many persons involved in the email communication. It seems like those sending the emails are only trying to get the problem off their shoulder by sending the mail to a group of people and hope that someone reacts to the problem. Within the group of people receiving the mail, there are often persons that have no connection to the problem, nor do they even need this kind of information for their work. This only creates unnecessary email overflow for the persons that are in CC and impacts the effectiveness of the persons work.

The CC culture needs to be considered and it must be made clear within the whole organisation, that emails should not be sent, nor persons added to CC unless the sender is certain, that the recipient needs this information or is the correct receiver of this information. Adding everyone in CC will only lead to information overflow which will in turn only decrease the likelihood of the email being read and increase the likelihood of important information being missed by those receiving it (Madanchian and Taherdoost, 2016; Jerejian et al, 2013).

For emails to be an effective communication channel, it needs to follow certain criteria along with the rules set by the organisation (Lucas, 1998; McManus, Sankar, Carr and Ford 2002; Lee, 1994; Mark, Iqbal, Czerwinski, Johns, Sano and Lutchyn, 2016). According to Byron (2008) emails have low level of richness when it comes to describing and demonstrating emotions, body language and other descriptive information which otherwise is demonstrated, for example in a face-to-face meeting. Therefore, the optimal solution would be to communicate simple and little information messages in emails. This would suggest that if an email contains too much information it is likely that the email will not be read or that the information provided will not be grasped by the receiver and thus not reacted to. We could see this in our AIM session, where many attendees were complaining that many emails were unclear. Information that should be communicated by mail needs to be simple and easily understood. E.g. “this should be done prior to this date.”, “Today is the deadline” or “tomorrow we have a meeting”. It should not include long lists of information with detailed information about something, that will only decrease the likeliness of someone reading it thoroughly. Well written, structured emails with information that is easily understandable by the recipient will lead to more efficiency in communication and more effectiveness in the organisation (Jerejian, Reid and Rees, 2013; McManus, Sankar, Carr and Ford 2002; Mano and Mesch, 2010).

The investigators are not aware of any rules or regulations on how to treat email communication within the organisation and now the employees are not following any standardized procedures, if there are any. This uncertainty of how to treat email communication seems to have led to the overflow of unnecessary information. Email communication inside the organisation can be improved for better effectiveness that can in turn lead to increased productivity (Byron, 2008). Not only does effective email culture increase the effectiveness of the organisation but as well it increases the employee satisfaction (Lee, 1994; Lucas, 1998; Mano and Mesch, 2010). For this to be achieved the organisation must set some rules or constraints regarding how email communication should be perceived. Although, we believe that putting constraints on communication is not a path the organisation should take.

We argue that when the current situation is not working and affecting employees’ performance, rules for steering it back on track should be implemented. From interviews and workshops conducted it is our firm belief that simple and clear rules should be implemented so that every employee has a picture of how the email communication aspect of the organisation should function. Another way to go is to invest in a software which can help organisations with email communication. Such a software could help identify which email are more important for employees to read and if the email is a copy (Lucas, 1998).

6.2 Meetings

The analysis shows that meetings in the manufacturing organisation needs to be improved due to their ineffectiveness according to the respondents. The findings demonstrate that along with the ineffective meetings, the employees spend time in meetings which they perceive to be ineffective on weekly basis. Rogelberg, Scott and Kello (2007) describes that these kinds of ineffective meetings can cause frustration rather than enlightenment and as well be perceived as a waste of time. The analysis also showed that the employees seem to be aware of the current situation but there are no indications of employees nor management wanting to spend time in improving it.

This needs to be changed because the poor decision making, and ineffective meetings affect productivity (Antony, 1979). According to Rogelberg, Scott and Kello (2007) organisations need to focus on three things to improve the organisational meeting culture; employee meeting skills, managers meeting skills and implementing a best practice of how to hold a meeting. There are many researches available out there on meetings, highlighting how to make meetings more effective and what the best practice is for of meetings. From our results we found that when feedback from meetings are lacking it affects the effectiveness of the organisational communication, as well as the productivity of the employees. Further, it is our opinion that good feedback from the meetings will lead to better understanding of what employees' responsibilities are and with whom the employee, department must cooperate with to deliver the required result.

Many of these recommendations put forth in literature are general and not chosen for specific industries. Therefore, we the investigators have chosen criteria that we believe would be beneficial for a manufacturing organisation that has difficulties with employees not showing up to meetings, no meeting structure, e.g. confusion about what is discussed during the meeting, what kind of meeting it is, and poor decision making in meetings. Out of several claimed criterion, a selection from Littlejohn (1989), Baran et al (2012), Geimer et al (2015), Allen et al (2014), Scott et al (2012), Leach et al (2009), Carlozzi (1999) and Antony (1976) seems to fit well with the poor meeting culture situation and has the potential to affect the meeting culture the most. The criteria suggested below concerns types of meeting, what to think about when you are leading a meeting and when you are participating in a meeting.

According to us meetings are a forum for communication, and we believe that it is important for organisation to have set forums for different kind of communication of information. Organisations need to differentiate their meetings by looking at what kind of communication is and needs to be communicated (Littlejohn, 1989; Baran et al, 2012; Allen et al, 2014; Scott et al, 2012; Antony, 1976). As mentioned in chapter 2, organisations can implement different types of meetings. First, we recommend that organisation has information meetings. In this kind of a meeting the organiser is the one speaking and others listen. Here information is shared about upcoming projects, new products, changes or new directives. We believe that for this sort of meeting the organizer does not need to have an agenda sent out in advanced or minutes to be sent out afterwards. However, the organiser needs to mention that information will be presented at the meeting to those he or she invites to the meeting.

Furthermore, the information meeting can be held on a department level, where only employees from one department attend. Further, it can be held on a cross-departmental level, which is when the information presented at the meeting will affect different departments or employees in different departments. To put it short in information meeting the organiser should invite only those that are affected by the information. Another important factor is that there should be a moderate level of information communicated, since too much information can lead to employees being confused and losing interest in the meeting. This can affect the perception on future meeting negatively. Considering the size of information meetings, it could be a group in one department or several departments. We recommend that organisations invite less employees and have two meetings communicating the information, rather the have one meeting with many employees attending. The reason for this is that it is easier to control and direct smaller groups than bigger ones.

Moreover, we suggest that all information meetings should always be held at the same location, of course when the employees invited exceeds the capacity of the location a new location must be found. An important factor to all the meeting types is how the location the meeting is taking place in is arranged. In an information meeting the arrangement of the room should be like a classroom. (see figure 17). In this set-up the attention is on the organiser and the information that is communicated to employees.

Secondly, we suggest discussion meetings. In discussion meetings, problems are put forward and possible solutions are discussed. If conclusion is made on what solution is taken, then the goal of the meeting is to figure out a way of standardising the procedure so there will be no need for discussing the matter again soon. Depending on the complexity of the decision being taken the invitees range from regular employees to upper management. Also, if needed, employees with special knowledge on the subject are invited to share their opinion. A discussion meeting should, according to our opinion be kept small. We believe that there should not be more than ten persons in a discussion meeting. This is beneficial because it is easier to create a dialogue when the group is small.

Additionally, it is easier to sort information when there is a small number of employees and thirdly, all employees cannot be involved in making decisions. Considering the arrangement of the location in a decision meeting we believe that a U-shaped arrangement would be the best fit. In a U-shaped arrangement the organiser will still have a central role but not as dominant as in the information meeting. Further, in a U-shaped arrangement, employees would be able to create a dialogue across tables and information can much easier be communicated. For a discussion meeting an agenda must be sent out in advance and minutes must be sent afterwards. We also believe that it is paramount to send feedback that is more descriptive than meetings minutes to those employees that attended the discussion meeting.

Lastly, decision making meetings is recommended. These meetings are held only for the sole purpose of deciding. In the decision-making meetings employees in top management should be participating. Also, if needed, employees with special knowledge on the subject at hand are invited to share their opinion. What we believe is important in decision meetings, is that those invited have gotten background information about the issue at hand in advance, thus giving the invitees time to read, reflect and create a picture of the issue which can help them decide. The organiser must have a clear agenda of what must be done during these meetings and this must as well be sent out prior to the meeting.

Another, important factor is feedback. The organiser must make sure that she or he gets feedback from the attendees regarding the issues at hand, also minutes from the meeting must be available. Moreover, since employees from lower levels would not attend the decision-making meeting organisation must make sure that the decisions made are communicated out to the employees, even though they are not definite. Making the rest of the employees aware of the what has been discussed and decided will create a positive feeling inside the organisation. Employees will feel included and the group feeling is strengthened, enhancing communication and cooperation between employees and departments inside the organisation. This is mentioned in Bergman and Klefsjö (2010) as "*Let everybody be committed*" (Bergman and Klefsjö 2010, p.46) and is one of the cornerstones in Total Quality Management.

Looking at the arrangement in the room where a decision-making meeting is held, emphasis is directed towards a setup where all attendees can see each other and where the organiser does not get as much attention as in the previous meeting arrangements. For a decision-making meeting we have put forth a square arrangement where a proactive dialogue and conversation can grow (see figure 17). As seen in figure 17, the organiser in inside the arrangement compared to the other meeting types. The reason for this, is that focus should be on deciding, as well a proactive conversation between the attendees. We believe that if the organiser is positioned outside the arrangement the focus will be on her or him to direct the conversation, thus a free and open conversation will not be achieved. In addition to this, it was found in the result that to many employees are attending meetings, therefore we believe that in a decision-making meeting there should be a maximum of ten persons. Too many employees attending meetings lead to ineffective decision making. ineffective and unproductive meetings (Baran et al, 2012; Geimer et al, 2015; Allen et al, 2016; Scott et al, 2012; Leach et al, 2009; Littlejohn, 1989; Eunson, 2012; Carlozzi, 1999; Antony, 1976).

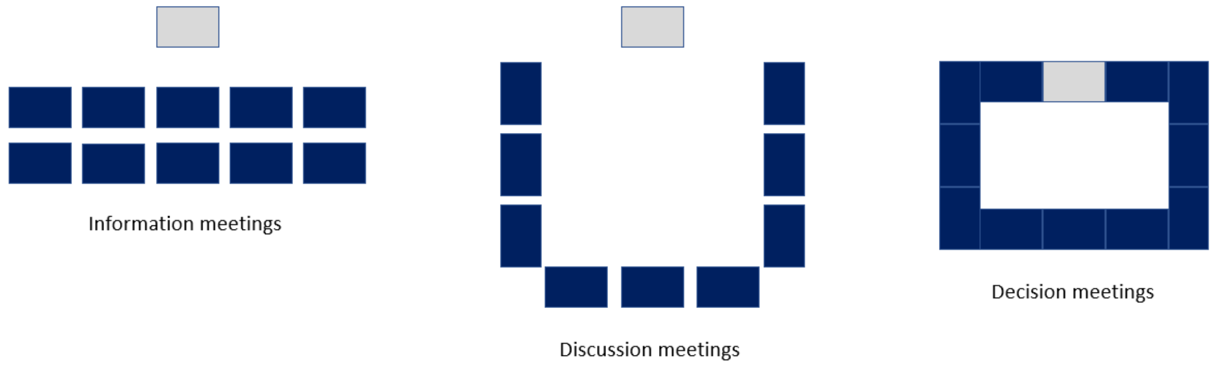

Figure 17, how seats should be placed during the different kinds of meetings

Now that we have put forth the different types of meeting, we believe that it is important to highlight some aspects that need to be taken into consideration when organising a meeting. Carlozzi (1999) discusses some criteria for effective, efficient and productive meeting outcome. If you are holding the meeting you should consider the following:

- Before you send a calendar invitation, have information ready.
- What are the meeting's purpose and objectives? Formulate a clear statement of what you intend to accomplish.
- How long will it take to come to agreement or make decisions? Keep your meeting as short as realistically possible but allow enough time to get the job done.
- Whose participation is essential to achieving those objectives. Each attendee should be there for a clearly defined purpose.
- The meeting should end with a next steps or follow-up and, if applicable, information about the next meeting.
- As soon as possible after the meeting, send a written recap or minutes to all attendees and other who will be affected by what took place at the meeting. It should include a summary of the discussion; all decisions made, or agreements reached; actions to be taken, along with responsibilities and deadlines; and if appropriate, the date, time and place of the next meeting.

The individual who calls for a meeting should state what kind of a meeting it is. Also, in each instance it should be noticed that when choosing a location for a certain sort of meeting it could be beneficial to have that sort of meeting at the same location all the time so that it grows into the culture of the organisation.

Finally, it is our opinion that there should be some criteria which the attendees should consider when they are invited to a meeting. Therefore, participants in a meeting should think of these following criteria suggested by Carlozzi (1999)

- Arrive on time. In the age of information technology, there is no excuse for failing to notify the meeting initiator or moderator that you will be delayed or must cancel at the last minute.
- Come fully prepared. This means you've reviewed all background material, noted your questions, comments and thoughts, prepared for an assigned role and have all necessary materials at hand.
- Provide your input clearly and concisely; if you are making a presentation, stay within the time allotted to you.

- Be constructive, not destructive. If you must challenge an idea, be prepared to offer an alternative.

6.3 Downward communication

The analysis unearthed that more than half of the employees do not work according to their job description, either due to them not knowing the job description or not having any. The lack of job description induced uncertainty on deliverables and who oversees certain processes and assignments. It shows especially that the downward communication is not functioning. According to Canary and McPhee (2010) and Eunson (2012), downward communication is used to communicate to employees, e.g. what the objectives of the organisation are and what the employee's job description is. It also came to light that certain employees had a rigorous amount of work to do and barely cope with the related stress inflicted on them while others do not feel the same way, which can be connected to the lack of job description. Meaning that some employees are doing work they should not be doing while others are not doing work they should be doing, but the data gathered does not proof that this is the case although there are some indications of it.

This perception of a lack of a job description could be due to that the employees receiving this information about their job description do not understand it. It could be due to that the sender of the information has made the information too vague or ambiguous for the recipient to understand it. Then it becomes hard for the employee to work according to their job description or even understand what their job description entails. Either way, though it is not known where the problem originates from, this lack of job description underlines that there is a communication problem inside the organisation. This can cause problems for the organisation if it is not improved, because the one main factor affecting organizational performance is poor or lack of effective communication (Clegg et al, 2016).

6.5 Cooperation

The results from the analysis state that cooperation inside the organisation is not working properly. This indicates that the horizontal communication is not working as it is supposed to. Thus, making it hard for the employees inside the organisation to communicate efficiently and productively across departments

Eunson (2012) states that the horizontal communication is of high importance in a manufacturing organisation that works with make-to-order or customised products. Littlejohn (1989) and Wheelwright and Clark (1992) also state how important the horizontal communication is for ensuring quality of customised products. Littlejohn (1989) discusses how good horizontal communication can enhance teamwork and cooperation between departments and that it creates a friendly environment with less social barriers.

Although it is not certain what is causing the cooperation problems inside the organisation, it is possible to improve the situation by reducing the communication barriers. There are five factors that can be considered, to improve horizontal communication by reducing communication barriers (Littlejohn, 1989; Greenberg and Baron, 2008; Wheelwright and Clark 1992; Eunson, 2012; Simpson, 1959). The five factors are:

1. Implement a constant rotation of employees in different departments, thus stimulating consensus and understanding, as well a group feeling where employees have empathy towards colleagues.
2. Avoid promoting competition between groups or departments with win-lose or reward outcomes, instead focus on distributing resources and information fairly and equally.
3. Focus on organisational effectiveness and efficiency through emphasis on the different departments' contribution to the overall outcome.
4. Enable a high level of interaction and cooperation between departments through support and frequent communication.
5. Plan for team activities out of the office to facilitate communication between employees and department in the horizontal communication. This reduces negative impact on communication in the horizontal direction.

6.6 Difficulties

The investigators met resistance when conducting this study. The difficulties mainly revolved around data collection. The investigators met resistance when sending out the questionnaire and when scheduling the AIM sessions. The resistance with the questionnaire was that at first no one answered, with the second reminder some of the population had answered and it was not until the fifth reminder was sent that the researchers thought they had gotten enough answers. It was also needed to go physically and ask persons to answer the questionnaire as some of the employees had not even read the mail sent. When planning the AIM session, the investigators met the resistance with employees stating that they did not see the need for this kind of workshops and that they did not have time for taking part. Two out of four workshops needed to be rescheduled and, in most cases, no one bothered answering the calendar invitation. So, on the day of the workshop, the investigators showed up and waited and hoped-for employees to attend. It must be noticed that often, employees stated after the workshop that they felt it was a good workshop and would like to attend more of the like in the future, even those that had shown the most resistance in participating.

6.7 Sustainability

If the organisation implements what is suggested, it will potentially affect the sustainability of the organisation. It affects the social side of the organisation by reducing stress amongst employees and thus employees have less days off work, due to stress related sickness. It can also affect the cooperation and communication within the organisation, so that the organisation has increased chances of having the correct material for production at the correct time. Thus, decreasing the need of special transports such as flying in material or low utilisation of truck space and by that decreasing the environmental effect. This can also in turn lead to that products are correctly produced and put together, decreasing the amount of material scrapped. In general terms it means improved management that potentially affects the bottom line positively.

7 Conclusion

Communication within organisations is an interesting and a much-needed topic to be considered. As many businesses focus on improvements that have direct and visual improvements, such as 5S which is a tool for making workstations look clean and in order. One of the unseen factors that have impact on the organisational effectiveness is communication. Communication is a subject which has been studied for a long time and there is a comprehensive amount of literature available on it. Communication in organisations are to us a vital aspect to consider. There are three reasons on why organisations should consider it, first it can be beneficial for the social aspect of the organisation. Secondly it can have good outcome of the financial aspect of the organisation. Third, it can increase the production of better-quality items with lower production cost. However, what was found in this master's thesis was that not many researches or studies have been conducted looking at the causes of communication problems between departments in organisations. Most of the literature regarding communication concerned on how to enhance the effectiveness and efficiency of communication between departments in organisation and within the whole organisation to increase productivity. Further, communication literature covering employee empowerment and satisfaction was also apparent in our search for relevant theory for this case study.

Improvements on communication are important and this master's thesis has shed light on communication problems between departments within a manufacturing organisation. The findings will be of interest to manufacturing organisations that have communication problems internally. The methods, such as the AIM sessions, interviews and questionnaire that were used in this master's thesis can be applied at other manufacturing organisations to find causes regarding communication problems. In this master's thesis, AIM sessions were the largest data gathering method. The AIM method is a method that can be used in organisations to shed light on issues from an employee perspective as well as it can work as a brainstorming tool. Although the AIM method has in this thesis been used to bring forth communication issues, it can also be used to tackle other issues within organisations.

When analysing the collected data it was possible to answer the first research question, *what are the underlying factors causing intra-organisational communication problems between departments in manufacturing organisations?* The analysis identified that the organisation has problems with email communication, meeting culture and job descriptions, which we believe is affected by poor downward communication and poor cooperation. Furthermore, answering the second research question, *what recommendations can be made for improvements of intra-organisational communication at manufacturing organisations?* We are able to give suggestions for improvements. The improvements brought forward suggest how email communication should be treated, how meetings can be set up, how to enhance downward communication and how to improve horizontal communication for better cooperation between departments and generally within organisations. Implementations like these are likely to benefit any organisation in the long run. They can decrease the workload, improve the moral and efficiency inside any organisation. Thus, the intra-organisational communication is improved and the chances of manufacturing the correct quality of items at the correct time and having the correct material in stock at the time needed is increased. Another effect it will have is that it decreases the need of rework, stop on the production line and the need of following up on bad quality.

This master's thesis has identified the factors of communication problems between departments in the organisation investigated. It has as well brought to light suggestion for improvements which can be implemented for improving intra-organisational communication problems between departments. Furthermore, the findings in our master's thesis will add to the current literature about intra-organisational communication, more specifically communication issues between departments. Further research should be undertaken to check if the underlying factors of communication problems are to be found in other manufacturing organisations. Then the next step would be to check how the suggested improvements affect the communication problems at other manufacturing organisations. Conducting such an investigation will validate whether the improvement suggestions brought forth in this master's thesis.

References

Adler, N. J. (1986). International dimensions of organizational behavior. Boston, Mass: Kent Publ.

Allen, J, A., Beck, T., Scott, C, W., & Rogelberg, S, G. (2014). Understanding workplace meetings: A qualitative taxonomy of meeting purposes. Management Research Review, 37(9), 791-814.

Allen, J. A., Lehmann-Willenbrock, N., & Sands, S. J. (2016). Meetings as a positive boost? how and when meeting satisfaction impacts employee empowerment. *Journal of Business Research, 69*(10), 4340-4347.

Alänge, S. (2009). The affinity-interrelationship method AIM. Gothenburg: Chalmers University of Technology.

Antony, J. (1976). How to run a meeting. Harvard Business Review, May-April, pgs, 43-58.

Baran, B. E., Shanock, L. R., Rogelberg, S. G., & Scott, C. W. (2012). Leading group meetings: Supervisors' actions, employee behaviors, and upward perceptions. Small Group Research, 43(3), 330-355

Bergman, B., & Klefsjö, B. (2010). Quality from Customer Needs to Customer Satisfaction. Lund: Studentlitteratur.

Bryman, A., & Bell, E. (2015). Business research methods (4th ed.). Oxford: Oxford Univ. Press.

Byron, K. (2008). Carrying too heavy a load? the communication and miscommunication of emotion by email. The Academy of Management Review, 33(2), 309-327. doi:10.5465/AMR.2008.31193163

Carlozzi, C. L. (1999). Make your meetings count. New York: American Institute of CPA's

Clegg, S., Kornberger, M., & Pitsis, T. (2016). Managing & organizations: An introduction to theory and practice (4th ed.). London: SAGE.

Cohen, M. A., Rogelberg, S. G., Allen, J. A., & Luong, A. (2011). Meeting design characteristics and attendee perceptions of staff/team meeting quality. Group Dynamics: Theory, Research, and Practice, 15(1), 90-104.

Crampton, S. M., Hodge, J. W., & Mishra, J. M. (1998). The informal communication network: Factors influencing grapevine activity. Public Personnel Management, 27(4), 569-584. doi:10.1177/009102609802700410

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (Fourth, international student ed.). Los Angeles, Calif: SAGE.

Deutsch, M. (2006). Cooperation and competition. In M. Deutsch, P. T. Coleman, & E. C.

Eunson, B. (2012). Communication in the Workplace. John Wiley & Sons.

Fitzek, F. H. P., Katz, M. D., & SpringerLink (e-book collection). (2006). Cooperation in wireless networks: Principles and applications; real egoistic behavior is to cooperate! (1. Aufl.;1; ed.). Dordrecht: Springer. doi:10.1007/1-4020-4711-8

Floyd, S. W., & Wooldridge, B. (1992). Managing strategic consensus: the foundation of effective implementation. The Executive, 6(4), 27-39.

Geimer, J. L., Leach, D. J., DeSimone, J. A., Rogelberg, S. G., & Warr, P. B. (2015). Meetings at work: Perceived effectiveness and recommended improvements. Journal of Business Research, 68(9), 2015-2026

Gerring, J. (2004). What Is a Case Study and What Is It Good for? American Political Science, 98(2), 341-354.

Greenberg. J., & R. A. Baron. 2008. Behavior in Organizations. 9th ed. Upper Saddle River, NJ: Pearson Education.

Habib, M., Pathik, B. B., & Maryam, H. (2014). Resource Methodology - Contemporary Practice: Guidelines for Academic Researchers (1 ed.). Newcastle upon Tyne, England: Cambridge Scholars Publishing.

Hargie, O., & Tourish, D. (2009). Auditing organizational communication: A handbook of research, theory and practice. Routledge.

Hartley, P., Bruckham, C.G. (2002): Business communication: an introduction. Routledge, London.

Jerejian, A. C., Reid, C., & Rees, C. S. (2013). The contribution of email volume, email management strategies and propensity to worry in predicting email stress among academics. Computers in human behavior, 29(3), 991-996.

Keyton, J. (2011). Communication and organizational culture: A key to understanding work experiences. Sage.

Knippen, J. T. (1974). Grapevine communication: Management and employees. Journal of Business Research, 2(1), 47-58.

Kothari, C. R. (2004). Research Methodology: Methods & Techniques (2 ed.). New Delhi: New Age International (P) Ltd Publisher.

Kreps, G. L. (1990). Organizational Communication: Theory and Practice. 2nd ed. NY: Longman.

Kujala, J., Lehtimäki, H., & Pučėtaitė, R. (2016). Trust and distrust constructing unity and fragmentation of organisational culture. Journal of Business Ethics, 139(4), 701-716.

Leach, D. J., Rogelberg, S. G., Warr, P. B., & Burnfield, J. L. (2009). Perceived meeting effectiveness: The role of design characteristics. Journal of Business and Psychology, 24(1), 65-76.

Lee, A. S. (1994). Electronic mail as a medium for rich communication: An empirical investigation using hermeneutic interpretation. MIS Quarterly, 18(2), 143-157.

Liker, J. K., & Choi, T. Y. (2004). Building deep supplier relationships. Harvard Business Review (12), 104-113.

Littlejohn, S. (1989). Theories of Human Communication, 2nd ed. Belmont, CA: Wadsworth.

Littlejohn, S. W., & Foss, K. A. (2010). Theories of human communication. Waveland press.

Lucas, W. (1998). Effects of e-mail on the organization. European Management Journal, 16(1), 18-30.

Madanchian, M., & Taherdoost, H. (2016). Perusing of Organizational Culture Effects on E-Mail Communication. Procedia Technology, 22, 1076-1083.

Mano, R. S., & Mesch, G. S. (2010). E-mail characteristics, work performance and distress. Computers in Human Behavior, 26(1), 61-69.

Mark, G., Iqbal, S. T., Czerwinski, M., Johns, P., Sano, A., & Lutchyn, Y. (2016, May). Email duration, batching and self-interruption: Patterns of email use on productivity and stress. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (pp. 1717-1728). ACM.

McManus, D. J., Sankar, C. S., Carr, H. H., & Ford, F. N. (2002). Intraorganisational versus interorganizational uses and benefits of electronic mail. Information Resources Management Journal, 15(3), 1.

Miltenburg, J. (2009). Setting manufacturing strategy for a company's international manufacturing network. International Journal of Production Research, 47(22), 6179-6203.

Nadler, D. A., & Tushman, M. L. (1997). Implementing New Designs: Managing Organizational Change, Managing Strategic Innovation and Change. A Collection of Readings, 595-605.

Remenyi, D. (1998). Doing Research in Business and Management: An Introduction to Process and Method. London: SAGE.

Rogala, A., Bialowas, S., & SpringerLink (e-book collection). (2016). Communication in organizational environments: Functions, determinants and areas of influence. London: Palgrave Macmillan UK. doi:10.1057/978-1-137-54703-3

Rogelberg, S. G., Scott, C., & Kello, J. (2007). The science and fiction of meetings. MIT Sloan Management Review, 48(2), 18.

Schalk, R., & Curseu, P. L. (2010). Cooperation in organizations. Journal of Managerial Psychology, 25(5), 453-459. doi:10.1108/02683941011048364

Schein, E. H. (1996). Kurt Lewin's change theory in the field and in the classroom: Notes toward a model of managed learning. Systems Practice, 9(1), 27-47. doi:10.1007/BF02173417

Scott, C. W., Shanock, L. R., & Rogelberg, S. G. (2012). Meetings at work: Advancing the theory and practice of meetings. Small Group Research, 43(2), 127-129.

Scupin, R. (1997). The KJ method: A technique for analyzing data derived from Japanese ethnology. Human organization, 56(2), 233-237

Shannon, C. E., & Weaver, W. (1949). The mathematical theory of communication. Urbana, Ill. : Univ. of Illinois P., 1949

Simpson, R. L. (1959). Vertical and horizontal communication in formal organizations. Administrative Science Quarterly, 188-196.

Stanley, M. J. (2008). I Heard It Through the Grapevine: Communication in the Workplace. Indiana Libraries, 27(2), 86-91.

Stevanović, M. I., & Gmitrović, A. M. (2015). Importance and role of internal communication in organizations. Applied Mechanics and Materials, 806, 302. doi:10.4028/www.scientific.net/AMM.806.302

Tjosvold, D. (1984). Cooperation theory and organizations. Human Relations, 37(9), 743-767. doi:10.1177/001872678403700903

Tubbs, S. L., & Moss, S. (1974). Human communication: An interpersonal perspective. Random House.

Wheelwright, S. C., & Clark, K. B. (1992). Revolutionizing product development: Quantum leaps in speed, efficiency and quality. New York: Free Press.