Purpose – Due to the proven effectiveness of agile teams in the software development industry more organizations are adopting the principles of the agile way of working at scale. In order to better understand this rather new way of working in large organizations, this research looks at the establishment of inter-team coordination that is required to align the activities of different agile teams in InSurCom.

Design/methodology/approach – A single case study research has been conducted in a large Dutch health insurance corporation InSurCom. The data of this case study research was collected from observations during the quarter break meeting and interviews with agile mission leaders, cluster leaders, and an agile coach. The data from these observations and interviews were analyzed by applying template analysis and described in the results and discussion & conclusion section of this research.

Findings – The relatedness of the agile teams in InSurCom is constructed by their shared objectives, the fact that they have to share the experts’ time that integrate and create the functionalities of the teams, the constraining element that bounds them by meetings and not being able to work on one specific component of the platforms with multiple teams together and the fact that one agile team is responsible for all the communication of the created functionalities. In a process facilitated by different meetings, the agile teams are coordinated by the application of plans & rules, the role of mission leader and cluster leader, the use of representations and routines. A central role in this coordination process is assigned to the mission leaders of the agile teams that performs a key inter-group role in the alignment of work activities of the teams.
Contents

1. Introduction .................................................................................................................. 5
  1.1. Introduction to theory ................................................................................................. 6
  1.2. Research question and objective ............................................................................... 7
  1.3. Contributions ........................................................................................................... 7
  1.4. Outline thesis ........................................................................................................... 8

2. Theoretical framework ................................................................................................ 10
  2.1. Agile teams .............................................................................................................. 10
    2.1.1. Scrum ................................................................................................................. 11
    2.1.2. Self-organization and Scrum ............................................................................... 12
  2.2. Agile at scale ............................................................................................................ 12
    2.1. Nature of coordination ......................................................................................... 14
    2.1.1. Interdependence between organizational parts ................................................. 14
      2.1.1.1. Shared resources ......................................................................................... 15
      2.1.1.2. Producer/consumer relationships ................................................................. 16
      2.1.1.3. Simultaneity constraints .............................................................................. 17
      2.1.1.4. Task/subtask dependencies ........................................................................ 17
    2.1.2. Coordination mechanisms ............................................................................... 17
      2.1.2.1. Plans and rules ............................................................................................. 18
      2.1.2.2. Objects and representations ..................................................................... 19
      2.1.2.3. Roles ........................................................................................................... 19
      2.1.2.4. Routines ...................................................................................................... 20
      2.1.2.5. Proximity .................................................................................................... 21
  2.2. Coordination in organizations ................................................................................. 21
  2.3. Coordination of agile teams .................................................................................... 23

3. Methodology ............................................................................................................... 1
  3.1. Study design ............................................................................................................ 24
  3.2. Case selection ......................................................................................................... 25
    3.2.1. InSurCom ......................................................................................................... 25
    3.2.1.1. Agile teams in the health-insurance industry ............................................... 26
  3.3. Data collection ...................................................................................................... 28
    3.3.1. Semi-structured interviews .......................................................................... 28
    3.3.2. Participant observations ............................................................................... 30
  3.4. Operationalization ................................................................................................. 31
  3.5. Data analysis ......................................................................................................... 31
3.6. Research ethics ...........................................................................................................32
3.6.1. Informed consent ....................................................................................................33
3.6.2. Anonymity and confidentiality ..................................................................................33
3.6.3. Research in the employing organization .................................................................34
4. Results ............................................................................................................................36
4.1. Work focus of the agile teams .....................................................................................36
4.2. Agile teams in the cluster existing customers ..............................................................36
4.3. Coordinating interdependencies between agile teams ................................................39
4.3.1. Task/subtask dependencies ....................................................................................40
4.3.1.1. Cluster objectives and team objectives .................................................................41
4.3.1.2. Overlapping team objectives ..............................................................................42
4.3.1.1. Coordinating the task/subtask relation .................................................................42
4.3.1.1. Strategic canvas .................................................................................................42
4.3.1.1. Demo meetings ....................................................................................................43
4.3.1.3. Role of mission leader .......................................................................................44
4.3.1.4. Rules ....................................................................................................................44
4.3.1.5. Role of cluster leader ..........................................................................................45
4.3.1.6. Cluster meeting ..................................................................................................46
4.3.1.7. Informal meetings ...............................................................................................46
4.3.1.8. TFS-system .........................................................................................................47
4.3.2. Shared resources ....................................................................................................48
4.3.1. Coordinating shared resources ...............................................................................49
4.3.1.1. Epic development and Refinement sessions .........................................................49
4.3.1.2. QBR-meeting .....................................................................................................50
4.3.1.3. Rules of the QBR-meeting ................................................................................50
4.3.1.4. Role of mission leader during QBR-meeting .....................................................51
4.3.1.5. Role of cluster leader during QBR-meeting .......................................................51
4.3.1.6. Epic plan board during QBR .............................................................................52
4.3.1.7. Rules for creating the epic plan board ...............................................................52
4.3.1.8. Epic plan board ................................................................................................53
4.3.2. Simultaneity constraint ..........................................................................................53
4.3.1. Coordinating simultaneity constraint .....................................................................55
4.3.1.1. Platform component constraint .........................................................................55
4.3.1.1.1. Epic plan board .............................................................................................55
4.3.1.1.2. Scrum ..............................................................................................................56
4.3.1.2. Meeting constraint ........................................................................................................... 56
4.3.1.2.1. Outlook agenda system ................................................................................................. 56
4.3.2. Producer/consumer relation ................................................................................................. 57
4.3.1. Coordinating producer/consumer relation ........................................................................ 58
4.3.1.1. Role of mission leader ..................................................................................................... 58
4.3.1.2. Role of content and communication expert ................................................................. 59
4.3.1.3. Backlog routine ............................................................................................................... 59
4.3.1.4. Content calendar ............................................................................................................ 60
5. Discussion & Conclusion .......................................................................................................... 61
5.1. Conclusion ............................................................................................................................ 61
5.1.1. Coordinating the task/subtask interdependency .............................................................. 61
5.1.2. Coordinating the shared experts’ time .............................................................................. 62
5.1.3. Coordinating the simultaneity constraint ......................................................................... 63
5.1.4. Coordinating the communication of new functionalities .............................................. 63
5.2. Objective of the research ..................................................................................................... 64
5.3. Theoretical implications ...................................................................................................... 65
5.4. Managerial implications ...................................................................................................... 65
5.5. Limitations of the research .................................................................................................. 66
5.6. Further Research suggestions ............................................................................................. 67
5.7. Reflection .............................................................................................................................. 68
6. References ............................................................................................................................... 70
7. Appendixes ............................................................................................................................. 75
7.1. Appendix – Interview guide ................................................................................................. 75
7.2. Appendix – Interview cluster leader ................................................................................... 76
7.3. Appendix – Interview mission leader .................................................................................. 78
7.4. Appendix – code table .......................................................................................................... 80
1. Introduction
The market needs of today are changing at a higher speed than ever before. Organizations are forced to adapt to these needs more quickly and find suitable ways to deal with these ever-changing demands. One way organizations are dealing with changing demands is the adoption of the principles of agile working (Dybå & Dingsøyr, 2008). The principles of agile working are rooted in the software development industry, in which agile was first used as a reaction to the problems of the traditional planning based way of working (Cockburn & Highsmith, 2001). The core idea of working agile is that it enables organizations to be proficient at change and in this sense the organization is better armed to meet the changing demands of customers (Dove, 2002). The ideas of agile working were first formally summarized by different software practitioners in the so-called "agile manifesto" (Beck et al., 2001). In this manifesto Beck et al. (2001) came up with four crucial values for working in an agile way:

1. **Individuals and interactions over processes and tools**
2. **Working software over comprehensive documentation**
3. **Customer negotiation over contract negotiation**
4. **Responding to change over following a plan**

Underlying these four core principles is the concept of self-organizing teams, as the manifesto states that the best results emerge from self-organizing teams. These self-organizing teams are referred to as *agile teams* (Cockburn & Highsmith, 2001; Chow & Cao, 2008; Moe et al., 2008). Because these agile teams have proved their effectiveness in responding to the changing demands of customers in the software development industry, the ideas of agile teams are now entering large-scale organizations and more and more of these agile teams are arising in organizations (Paasivaara et al., 2014). However as agile teams were originally used for small-scale single-team projects, the introduction of several agile teams has resulted in new challenges for organizations (Boehm & Turner, 2005; Dikert, Paasivaara & Lassenius, 2016).

This challenge is mainly due to the fact that agile teams use particular methods to manage and conduct work processes and the fact that agile teams have to deal with more interdependencies between different activities and other teams in comparison to the traditional single-team projects in the software development industry (Dikert et al., 2016). Dingsøyr and Moe (2014) found that one of the challenges with the highest priority in the current agile literature is the concept of inter-team coordination that is required for adopting *agile at scale* (Dingsøyr & Moe, 2014).

As the ideas of agile working are now entering the room of many other organizational settings and different industries, a better understanding of how to deal with this new way of organizing
becomes increasingly important. Due to the fact that the literature on large-scale agile working is in its early stages of development, there is a great lack of sound academic work on this rather new phenomenon (Dikert et al., 2016). In order to better understand the challenges of inter-team coordination between agile teams, the first step is therefore developing our knowledge on the concept of agile at scale. More specific this means that it is necessary to get a better understanding of what agile at scale encompasses and develop our understanding of how inter-team coordination of agile teams is established in organizations.

1.1. Introduction in theory

Agile teams are based on the principles of self-organization and use particular methods to conduct their work activities (Schwaber & Beedle, 2002). These methods have incorporated the fact that demands from customers are unpredictable and therefore these methods have adopted high levels of incrementality, cooperativeness, straightforwardness and adaptiveness (Abrahamsson et al, 2017). Due to the proven effectiveness of agile teams in the software development industry, an increasing number of organizations have incorporated multiple agile teams in their way of working (Paasivaara et al., 2014). As earlier discussed, this introduction of multiple agile teams has resulted in new challenges related to establishing inter-team coordination between these teams (Dingsøyr & Moe, 2014).

According to the work of Thompson (1967), the need for coordination in organizations stems from the fact that all the different parts of any organization are in some way related to each other. The researcher states that there are different levels of interdependencies between different parts of the organization. For these different forms of interdependencies, different coordination mechanisms are appropriate. Malone and Crowston (1994) defined the constitutive elements of these interdependencies between different activities in the organization. The researchers suggest that different interdependencies could be coordinated by means of different coordination mechanisms (Malone & Crowston, 1994).

These coordination mechanisms are summarized in the work of Okhuysen and Beckhy (2009), who have combined different theories on coordination mechanisms into one framework. The researchers state that coordinating activities in organizations can be based on: plans and rules, objects and representations, roles, routines, and proximity. When looking at these mechanisms in large organizations working with multiple agile teams, Lindvall et al. (2004) found that with the introduction of more agile teams, more documents and formal meetings are required to deal with the interdependencies between these agile teams. According to Lindvall et al. (2004), the
introduction of these more formalized procedures however reduced the ability of the agile team to work agile and made communication between the teams less effective.

1.2. Research question and objective
In order to better understand the concept of inter-team coordination between agile teams and the challenges that this creates for organizations, the following research question will be captured in this research:

How is inter-team coordination between agile teams established in a large organization working with multiple agile teams?

To gain this knowledge, this research examines a large health insurance corporation (InSurCom) in the Netherlands that is currently working with agile teams in their Superior Customer Experience department (SCE). These teams have adopted the Scrum way of working in their everyday work processes. The teams are together responsible for optimizing the complete customer journey and share common objectives. Due to these shared objectives the teams are dependent upon each other and inter-team coordination between the agile teams is required.

The objective of this research is to get a better understanding of inter-team coordination of agile teams in InSurCom in order to further develop our understanding of agile at scale in organizations. In order to gain this knowledge, a case study research design is chosen for this thesis. Different members of agile teams, their cluster leaders and an agile coach were interviewed to get a specific and detailed picture of the different interdependencies and the coordination mechanisms that establish coordination between these teams in InSurCom. In addition to interviews, observations were conducted during the quarter break meeting (QBR), an event during which the different agile teams worked on their plans for the next quarter of the year.

1.3. Contributions
By further developing our understanding of inter-team coordination of agile teams different contributions to both literature and practice can be made. The most important contribution lies in the field of agile working at scale. As indicated, the current literature on large-scale agile is rather underdeveloped and mainly based on experience reports. By describing how inter-team coordination is established in InSurCom, progress can be made on our understanding of what the concept entails and how it is constructed in a large organization working with multiple agile teams.
Stated in the work of Dikert et al. (2016) is the fact that the challenge of coordinating multiple agile teams is caused by different interdependencies that these teams have to deal with on the organizational level. By describing the constitutive elements of the interdependencies between agile teams in InSurCom this research can contribute to better understand the nature of the challenges that are present with coordinating multiple agile teams.

In line with the contribution to better understanding the nature of the interdependencies between agile teams, this research will further develop our understanding of the different coordination mechanisms that are used to establish inter-team coordination in a large organization working with multiple agile teams. This is particularly important because according to the work of Linvall et al. (2004) more formalized coordination mechanisms can reduce the agility and communication effectiveness between agile teams. By describing the different coordination mechanisms integrated in InSurCom in relation to the interdependencies that they coordinate, a better understanding of the use of these mechanisms can be established.

Besides the theoretical contribution, this research will also contribute in a practical sense to the field of agile practitioners that want to implement the agile way of working in organizations. Indicated in the work of Dikert et al. (2016) is the fact that these practitioners struggle with implementing the agile way of working and one of the reasons is related to the fact they can find very little guidance in the literature on how to scale up the agile way of working. Even though this research does not describe how and what challenges can be expected by the implementation of multiple agile teams, this research could provide some guidance as it describes the constitutive elements of interdependencies and the coordination mechanisms that are used to establish inter-team coordination between agile teams in InSurCom.

1.4. Outline thesis

This thesis is structured as followed. First of all, a detailed description of agile teams and the methods these teams use will be provided based on the current literature. After describing agile teams, the theory chapter will provide an overview of the challenges that are related to coordination of agile teams based on the current literature on agile at scale. Then the concept of coordination is described in terms of interdependencies and coordination mechanisms that together construct coordination in organizations structured by the work of Thompson (1967). The second chapter concludes with describing inter-team coordination in the agile way of working. In the third chapter, the choice for a case study research design is explained and the data collection and analysis methods will be discussed. The fourth chapter will describe the
results based on the analysis of the collected data and the chosen research design. This thesis will conclude with a discussion and conclusion of the main findings.
2. Theoretical framework

In order to structure the theoretical framework that captures inter-team coordination of agile teams, first the current literature on agile teams will be discussed. In this, the distinction between agile teams and self-organizing teams will be elaborated upon to get a more detailed picture of what an agile team encompasses. After describing the core elements of agile teams, the concept of agile at scale will be made more explicit and the challenges related to inter-team coordination of agile teams will be described. This section will conclude with describing the literature on coordination and how this concept is related to the agile way of working.

2.1. Agile teams

Underlying the earlier mentioned four core principles of working agile, is the idea of working in self-organizing teams as the manifesto states that the best results emerge from self-organizing teams (Beck et al., 2001). This description of agile teams results in the fact that researchers have labeled or researched agile teams in most of the cases as self-organizing teams (Moe, Dingsøyr & Dybå, 2008; Hoda, Noble & Marshall, 2010). The underlying idea of these teams is that they are composed of “individuals [that] manage their own workload, shift work among themselves based on need and best fit, and participate in team decision making” (Highsmith, 2009, p. 56). Furthermore, these teams are able to keep reorganizing themselves to meet unpredictable challenges that arise (Cockburn & Highsmith, 2001).

However, by stating that agile teams base their work-processes on the principles of self-organization and are in their nature very flexible, these researchers imply that agile teams and self-organizing teams are the same. This would however also imply that self-organizing teams have the same characteristics as agile teams and the work on self-organizing teams that was already researched ever since the work of Trist and Bamforth (1951) could easily be used to better understand agile teams. However, the fact that agile teams have a particular level of self-organization does not mean that these teams are exactly the same as other self-organizing teams. What separates agile teams from other self-organizing teams are the methods that agile teams use to conduct their work. Agile teams stem from agile software development and this way of development comprises a set of different methods that can be used to quickly adapt to changes (Fitzgerald, Harnett & Conboy, 2006). Different researchers have already looked at these methods. Abrahamsson et al. (2017) summarized and compared these agile methods and state that agile development methods should be incremental, cooperative, straightforward and adaptive (Abrahamsson et al., 2017, p.19). One of the most well-known and most often used
method that agile teams all over the world have integrated is Scrum (Dikert et al., 2016; Fitzgerald et al., 2006).

### 2.1.1. Scrum

Scrum is a method focused on managing and tracking software development. The focus of Scrum is on gathering requirements, design, and programming. It contrasts the traditional planning-based way of working in the software development industry by the fact that Scrum assumes that these development processes are largely unpredictable. Therefore sprints, that focus on trial and error, are used to quickly produce results that can be adapted to the changing needs of customers (Fitzgerald et al., 2006). In order to get the scrum process structured, this method works essentially with three different phases in the development process. These phases will be described based on the work of Schwaber and Beedle (2002) in Abrahamsson et al. (2002).

The first phase of the scrum process includes the pre-game phase. The first step of this pre-game phase is planning. In this phase, all the requirements for the project are gathered in a so-called Product backlog list. These requirements do not only include the product requirements that are developed by all the different parties included but also relate to the operational requirements such as the resources needed, training and a risk assessment of the project. This product backlog can be seen as the backbone of the scrum process because this backlog is constantly updated and reviewed whenever requirements are adjusted.

When all the requirements for the development process are defined, the architecture/high-level design is planned. This architecture is based on the backlog that is produced and because the scrum process focuses on sprints, the first release dates are already planned.

The second phase of the scrum process is the development phase. This phase is treated as a ‘black box’ (Schwaber & Beedle, 2002 in Abrahamsson et al., 2002). This connotation means that in this development phase the unexpected is constantly expected. The different technical and environmental variables that are already expected to change during the process are handled by applying several scrum practices. During this process of development, sprints are used to produce adjustable outcomes more quickly. These sprints cover a time frame of a week to approximately a month. This means that during the development, multiple sprints ultimately lead to the end product.

The last phase of the scrum process includes the post-game phase. This phase is reached when all the different requirements are met. In this phase, the last documentation and implementations are conducted.
A particularly important role is awarded to the scrum master. The main responsibility of the scrum master is to keep track of the progress that is made during the development (Abrahamsson et al., 2002). Besides keeping track of the development progress the scrum master guards the objectives that were set (and adjusted) during the process of development (Rising & Janoff, 2000).

2.1.2. Self-organization and Scrum

The connection between the Scrum practice and self-organization can be found in the work of Schwaber and Beedle (2002) who describe the organizational requirements that are important for the Scrum way of working. The Scrum method requires the team to be able to self-organize in order to achieve the goal that the team has set (Schwaber & Beedle, 2002). The researchers further state that Scrum allows the team to do whatever the team decides is necessary to achieve these objectives. This does however not mean that there are no limitations for the team in place, this implies that the team is able to decide how to do its work given the objectives that were set. Moreover, “the team is responsible for using and conforming to any existing charters, standards, conventions, architectures, and technology” (Schwaber & Beedle, 2002, p. 38). In order for this to unfold, the researchers state that the members of the teams should self-organize in such a way that every member contributes to the goal and the outcome of the team (Schwaber & Beedle, 2002).

Establishing self-organization and making sure that the methods these teams use are able to unfold, means according to Cockburn and Highsmith (2001) that agile teams should be constructed based on a particular common focus that binds the team together. Furthermore, an agile team should have incorporated “a collaborative, but speedy, decision-making process; and the ability to deal with ambiguity” (Cockburn & Highsmith, 2001, p. 132). In this description it is important to note that agile teams are not leaderless, they have incorporated the ability to keep reorganizing them self in such a way that the team is able to deal with challenges as they arise (Cockburn & Highsmith, 2001).

2.2. Agile at scale

As more agile teams are arising in organizations a growing interest in the concept of agile at scale has developed in the current agile literature. Even though more attention is directed toward this field of research, this research area is at this point in time very underdeveloped. This notion is reflected in the fact that currently the literature even lacks a boundary concept that captures when an organization has become truly agile and has adopted agile at scale (Laanti,
Similä & Abrahamsson, 2013). Dingsøyr & Moe (2014) found during their workshop on agile at scale that the concept can refer to the number of products, number of projects and the size and number of teams applying agile. Even though little is said about the measure for stating whether an organization has applied the ideas of agile at scale, the most used measure for defining agile at scale is the number of teams and people involved in these teams. Therefore the work of Dikert et al. (2016) will be used to define agile at scale. Dikert et al. (2016) found in their literature review that the most suitable definition of agile at scale is referred to an organization that is working with at least 50 people or six teams in an agile way.

In this literature review on large-scale agile transformations, Dikert et al. (2016) grouped the main challenges and success factors for introducing agile at scale. Besides the general challenges related to implementing a new way of working such as resistance to change and lack of investments in the new way of working, the researchers identified that one of the most important challenge organizations face in an agile transformation relates to the coordination of multiple agile teams. This challenge emerged because even though flexibility is created on the team level this does not mean that the same level of flexibility and responsiveness is present in the surrounding organization. Because the agile way of working does not remove the interdependencies between the teams and other organizational parts, management has a hard time coordinating multiple agile teams (Dikert et al., 2016). Another reason for this challenge to arise is the fact that organizations create agile teams that can operate autonomously with a high level of independence. This high level of autonomy however results in the fact that for many agile teams it was hard to find a balance between their own team objectives and the broader objectives of the organization. The same challenge related to the coordination of multiple agile teams was found in the work of Lindvall et al. (2004). The researchers analyzed the findings of four large organizations who evaluated the effectiveness of agile methods in their organization. The researchers found that when multiple agile teams were distributed across different physical locations, the organizations faced problems with respect to communication and coordination between these teams. This problem of communication and coordination created a need for more formal communication in the form of documents and formal meetings. Eventually, this process of formalization resulted in the fact that communication between the teams was less effective and agility of the project the team was working on decreased (Lindvall et al., 2004). In order to better understand these challenges related to the coordination of multiple agile teams, the following sections will elaborate on the concept of coordination in organizations and what this means for the agile way of working.
2.1. Nature of coordination

“Basic to a theory of organizations is the premise that all organizations need coordination” (van de Ven, Delbecq & Koenig Jr, 1976, p. 322). Coordination of work activities has therefore been researched for a long time. Galbraith (1974) describes where the need for coordination in organization stems from. He formulates this by stating that when a large organization divides its work activities into different specialist sub-tasks the problem is to incorporate the different subtasks around the completion of the global task. This results in the problem to create mechanisms that allow coordinated action between multiple interdependent roles (Galbraith, 1974). Coordination is therefore defined as: “integrating or linking together different parts of an organization to accomplish a collective set of tasks” (van de Ven et al., 1976, p. 322).

To structure the literature on coordination in organizations the theory of Thompson (1967) is used. In general terms, Thompson states, in line with the earlier mentioned work of Galbraith (1974), that the need for coordination stems from different interdependencies between parts in an organization. For these different interdependencies, different coordination mechanisms are appropriate to integrate the different parts and to accomplish the overarching objective of the organization. In this relation, he explicitly states that for a particular interdependency there is a particular coordination mechanism that is most appropriate. In line with the theory of Thompson (1967), this section will first describe in more detail the different interdependencies between activities in organizations. After describing these interdependencies, the different coordination mechanisms that can be used in organizations will be discussed. Closing this section on coordination by describing the different interdependencies and coordination mechanisms related to the agile way of working. This structure based on interdependencies and coordination mechanisms is chosen for this research because the nature and number of interdependencies are found to be the most important reason for the challenges occurring in coordinating agile teams (Dikert et al., 2016).

2.1.1. Interdependence between organizational parts

The first step in defining the different concepts that are related to coordination is to define in more detail where the need for coordination stems from. As discussed above, coordination in organizations is required because different parts of the organization need to be integrated or linked together because there is some form interdependence between these activities. This notion is best captured in the work of Malone & Crowston (1994) that state: “if there is no interdependence, there is nothing to coordinate” (Malone & Crowston, 1994, p. 4). This idea on the nature of coordination is also defined in the work of Thompson (1967), that states that
different coordination mechanisms are appropriate for different interdependencies. These interdependencies stem from the fact that organizations are composed of interdependent parts and these parts are together responsible for creating the outcomes the organization strives for. A classification of these different interdependencies can be found in the work of Thompson (1967). Thompson states that in organizations three forms of interdependencies between different parts in the organization can be distinguished. He defines these interdependencies in terms of workflow. Thompson (1967) states that a hierarchy of different levels of interdependence between organizational parts can be defined. Thompson (1967) bases these different levels of interdependence on whether the particular workflow is independent or also called pooled interdependent, sequentially interdependent in which an order can be defined in the sense that one part has to perform decently before the other task can start performing its task, or reciprocally interdependent. In which reciprocally interdependency relates to a situation in which the outputs of each of the units involved ultimately become the inputs of each of the other units involved (Thompson, 1967).

Another perspective on the nature of interdependencies is described in the work of Pennings (1974). Contrary to the work of Thompson (1967), Pennings (1974) focusses on the interconnectedness of unit personnel in his description of interdependencies. He describes interdependencies as involving at least four bases of interconnectedness relating to the task, the role, the mutual needs or objectives and the knowledge of different unit personnel (Pennings, 1974).

These classifications do however not state in great detail what the constitutive elements of these interdependencies encompass. In the work of Malone and Crowston (1994) a more precise description of four common interdependencies between activities is described. Important to mention is the fact that the different interdependencies these researchers formulate are not exhaustive, meaning that it is assumed that other dependencies between activities exist in organizations. However as the current literature lacks a comprehensive list of the different constitutive elements of interdependencies, the work of Malone and Crowston (1994) is used to construct interdependencies. It is important to note that different interdependencies between activities can be present at the same point in time between the same set of activities. This means that a particular activity can have different forms of interdependencies with other activities.

### 2.1.1.1. Shared resources

The first interdependency relates to *managing shared resources*. This dependency relates to a situation in which different activities in the organization have to share limited resources.
Resources can relate to many different things such as money, storage space or an actor’s time. In such a situation, some form of resource allocation is required to manage the interdependence between activities in the organization (Malone & Crowston, 1994, p. 7). A special case of shared resources is the task assignment as a dependency between activities in the organization. Task assignment relates to the scarce time of an actor that has to be allocated to a particular task.

2.1.1.2. Producer/consumer relationships

The producer/consumer relationship refers to a situation in which one activity produces something that is used as an input for another activity in the organization. This relationship can be based on some physical element like in a manufacturing organization in which the outcome of the first step on the assembly line is the input for the next step on the assembly line. But it can also be about an information element when one person or one part of a computer program uses the information of another person or part as an input. This relationship between the producer and consumer leads to different kinds of dependencies that constitutes this relationship (Malone & Crowston, 1994).

The first kind of dependency that can be described is the prerequisite constraint. This constraint means that the activity of the consumer can only start when the activity of the producer is completed. This form of constraint is typical for manufacturing organizations as discussed earlier.

As the activity of the producer is completed this does not simply mean that the producer automatically receives the produced outcome. There is some form of transportation needed to get the physical element or information from the producer to consumer. This dependency relates to the concept of transferability as both parties are dependent upon the transportation of the element from the producer to the consumer. When the element being transported is information this concept can be described in terms of communication.

A third less evident dependency between a producer and a consumer in organizations is the fact that the produced outcome should be usable for the consumer. If for example the producer fully completes a particular output that is transferred to the consumer but the consumer is not able to use the outcome, the task that the receiver of the input has to perform cannot be executed properly. This idea is referred to as usability in the work of Malone and Crowston (1994).
2.1.1.3. Simultaneity constraints
Simultaneity constraints relate to activities that cannot or have to occur at the same point in time. To make this concept more understandable two examples will be used from the work of Malone and Crowston (1994). The first example captures a situation in which activities have to occur at the same point in time. This is best illustrated when people in the organization schedule a meeting. The activity that these people are scheduling implies that all the people attending this meeting should be there at the same point in time because else there is not much to discuss. Another example illustrates a particular situation in which activities are interdependent because they cannot happen at the same time. This is for example the case when a computer system uses one database or source to process particular operations. If the instruction of two processes can be started at the same time but there is only limited capacity to actually execute these two processes there is a situation in which both activities cannot be executed simultaneously.

2.1.1.4. Task/subtask dependencies
The task/subtask dependency relates to activities that are connected to some overall goal that is decomposed into different sub-objectives or subtask that ultimately together construct the overall goal. In this, there is a dependency between the subtasks or activities that are created and the overall goal that is set. This dependency can be seen as either a top-down or bottom-up construct. In the top-down construct, the overall goal is decomposed into subtasks that are related and together make up the overarching goal. In the bottom-up construct the only thing that is different, is the sequence in which the elements exist. Meaning that particular subtasks that are already executed can together form or achieve a new overarching goal (Malone & Crowston, 1994). The nature of the dependency in these two concepts does however not change because in either case there is a dependency between subtasks and the overall goal.

2.1.2. Coordination mechanisms
In order to establish coordination between the different dependencies discussed in the previous section, coordination mechanisms are integrated into organizations. These mechanisms that create coordination can have different forms and are based on different ideas in the current literature. Menon, Jaworski and Kohl (1997) found that besides the organizations' structure, the reward system focus can influence the coordination of interdepartmental interactions. Hart and Banbury (1994) found that the process of strategy making and the commonly agreed on values that are the result of this process can work as a particular coordination mechanism as well. In the work of Thompson (1967) the tree modes of coordination are described based on the work
of March and Simon (1958). In this work, standardization of work, coordination by plan and mutual adjustment are defined as the mechanisms appropriate for dealing with interdependencies in organizations.

As this field of research is based on different ideas with many different coordination mechanisms as a result, it is important to use a comprehensive framework to look at coordination mechanisms. This comprehensive framework of different coordination mechanisms can be found in the literature review of Okhuysen and Bechky (2009). The researchers examined the broad field of coordination theory and found that the most often used mechanisms to coordinate different interdependencies between activities are: plans and rules, objects and representations, roles, routines, and proximity. Besides a description of the coordination mechanisms, the researchers describe in what way the mechanisms actually coordinates activities in organizations. The coordination mechanisms and the way in which they coordinate will be discussed in the following section according to the work of Okhuysen and Bechky (2009).

2.1.2.1. Plans and rules

Plans and rules are one of the earliest studied mechanisms to coordinate activities in organizations and can be described as “some purposive element of formal organization” (Okhuysen & Bechky, 2009, p. 473). This broad definition of plans and rules implies that these purposive elements can include almost everything that is in some way pre-established and has a formal element in it. In the more recent literature plans and rules focus mainly on the preparation for a particular task completion (Okhuysen & Bechky, 2009). In this research, the concept of plans and rules will therefore relate to those purposive formal elements that are focused on the preparation for task completion.

In organizations, these plans and rules can serve different purposes. One way plans and rules can coordinate activities is by defining responsibilities for tasks. In this, plans and rules serve as an explanation of the activities that different parties have to proceed to complete a particular task. Another way in which plans and rules can serve as a coordination mechanism is when organizations have to allocate resources. This is for example the case in hospitals when a particular room (resource) cannot be scheduled for two operations at the same time and therefore schedules are constructed to allocate the resources to the tasks that needed to be completed. A less obvious way in which plans and rules can function as a coordination mechanism is by developing agreement between different parties in the organization. This development of agreement relates to the construction of particular plans and rules that
ultimately serve as a common point of focus and therefore increases the coordination among different parties.

2.1.2.2. Objects and representations

Objects and representations are often described in terms of how they can inhabit on the intersecting social worlds of different parties (Star & Griesemer, 1989). Meaning that they can be described as a particular description or presentation that is able to connect different parties from the organization. This is described in terms of an example derived from the work of Mark (2002) in which NASA engineers use spreadsheets to share information on the progress of different teams. Meaning that in this example the spreadsheet (representation) connects and therefore coordinates different teams to accomplish a particular task.

Objects and representations can be used as coordination mechanisms in many different ways. One way plans and representations coordinate activities is by direct information sharing as is the case in the example of NASA discussed above.

A second way in which objects and representations can function as coordination mechanism is when they are used as a scaffolding to structure and make more explicit what activities need to be done in order to complete the task at hand (Okhuysen & Bechky, 2009).

Another way in which objects and representations can function as a coordination mechanism is by acknowledging and aligning work. This is especially the case when different teams or parts of the organization interact around particular objects to align their work activities and acknowledge the work being done (Okhuysen & Bechky, 2009).

The last way in which objects and representations can facilitate coordination is by means of creating a common perspective. This means that they create a common understanding about a particular object or set of tasks and this common understanding can help to coordinate the work activities between different parts of the organization.

2.1.2.3. Roles

Roles represent expectations associated with social positions and can in this way facilitate continuity over time (Biddle & Thomas, 1966). However, roles are not only static, meaning that they are dynamically structured as expectations are negotiated over time (Turner, 1986). The underlying idea of these two components of roles is that they establish expectations that can serve as a means to coordinate work activities.

One way roles can function as a coordination mechanism is by monitoring and updating. This is reflected in a particular formal hierarchy in which the process of monitoring and updating is
a function of the created formal hierarchy. When a supervisor monitors the work of subordinates this can be seen as a form of coordination of work activities (Okhuysen & Bechky, 2009). Another way in which roles can function as a coordination mechanism is by means of substitution. This refers to the fact that roles are linked to particular responsibilities and when different parts in the organization have a shared understanding of these roles they can substitute for one another because they know what tasks and responsibilities are related to that specific role (Okhuysen & Bechky, 2009). This process of substitution can serve as a coordination mechanism in organizations. The last way in which roles can facilitate coordination is by creating a common perspective. This relates to particular intergroup roles that facilitate the information generation between different activities and teams. In this way, these intergroup roles can facilitate coordination by generating information between different activities (Okhuysen & Bechky, 2009).

2.1.2.4. Routines

Routines are one of the coordination mechanisms that have a very long history in the literature on coordination. Routines are defined as “repeated patterns of behavior that are bound by rules and customs” (Feldman, 2000, p. 611). The notion of behavior in this definition means that routines are not only static but constitute also a particular form of social interaction and social meaning that is embedded in routines.

Routines serve different coordination activities in organizations. The first way in which routines can serve as a coordination mechanism is that they track the task completion/stability and hand-off work. This means that routines, first of all, make task completion visible so that progress on a particular task can be observed by the different parties involved. Second of all routines have some form of sequence inherent in them which relates different activities together by establishing how work moves from one part of the organization to the other (Okhuysen & Bechky, 2009).

A third way in which routines work as a coordination mechanism is because they bring groups together. Because routines consist of particular connections between activities this connecting aspect brings different parts of the organization together and in this way coordination of the work is established.

As is the case in plans and rules, objects and representations, routines also create a common perspective as they establish some general understanding on the work activities that coordinate the work of different parts in the organization.
2.1.2.5. Proximity

The last and far less discussed coordination mechanism in literature is the physical proximity of people to one another. As stated in the work of Allen (1977), the distance between people influences the amount of interaction and communication between people. This relation between the physical distance of people to one another and communication is mediated by visibility and familiarity in the organization which has an impact on coordination of work (Okhuysen & Beckhy, 2009, p.479).

The most important way in which proximity functions as a coordination mechanism is by means of visibility. This visibility enables different parts of the organization to see the progress of other parts and by seeing the progress they can adjust their own work activities accordingly. This visibility can be established by means of monitoring and updating the different work activities that are performed.

Another way in which proximity enables coordination is by creating familiarity. In the coordination literature, familiarity refers to task-related information that is gained through the experiences of people working with others (Okhuysen & Beckhy, 2009). Increased familiarity basically strengthens the relationship and level of trust between people. This encourages people to embrace their interdependencies and results in more effective ways of coordination (Gittell, 2002). Due to higher levels of familiarity, people are better able to adjust their actions based on the anticipated actions of others. Besides better anticipating on the actions of others, familiarity creates a store of knowledge as people in the organization are better able to detect where particular information is stored embodied by a particular person in the organization.

2.2. Coordination in organizations

As earlier discussed, in this research the focus will be on the interdependencies between organizational parts as determinants for coordination, as the current literature on agile at scale defines these interdependencies as one of the most important reasons for the challenges regarding coordination of multiple agile teams (Dikert et al., 2016). Therefore the next step in examining coordination is to look at the different interdependencies and how they are related to different coordination mechanisms.

This process of linking different interdependencies to coordination mechanisms is captured in the work of Thompson (1967). The researcher states that different coordination mechanisms are appropriate for different interdependencies. Thompson (1967) states that when the level of interdependence between organizational units increases, more elaborate coordination mechanisms are appropriate to link and integrate these units. In his work, the researcher
describes how standardization of work is most appropriate for dealing with pooled interdependence. Planning is best suited for dealing with sequentially interdependent parts in an organization. And mutual adjustment is most appropriate for dealing with reciprocally interdependent parts in the organization (Thompson, 1967).

This relation between different forms of interdependencies is further analyzed in the work of van de Ven et al. (1976). The researchers extended the different hierarchical forms of interdependencies as described by Thompson (1967) with the concept of team workflow and looked at how the different levels of interdependence were related to different coordination mechanisms. The researchers found that when the level of task interdependence increases this results in an overall greater use of all the different coordination mechanisms combined. The researchers further found that when the workflow interdependence increased from sequential to reciprocal this resulted in a decline of impersonal coordination mechanisms such as plans, rules, policies and other formalized and standardized systems to coordinate work activities (Van de Ven et al., 1976).

Cheng (1983) on his turn extended the work of Van de Ven et al. (1976) by looking at the relationship between interdependencies of organizational tasks and coordination. The researcher found a linear relationship between the level of interdependence and coordination, meaning that when the level of interdependence increased, this resulted in an increase in the demand for coordination. In his research, Cheng (1983) measured interdependence as the extent to which the nature of the work required the members to work together. This research does however not capture what elements of the interdependence require the unit members to work together. The same holds for the concept of coordination as this was not indicated by different mechanisms used, but only by looking at the overall level of conceived coordination (Cheng, 1983).

In both the work of Van de Ven et al. (1976) and Cheng (1983) no significant results were however found on whether a particular level or type of interdependency could be linked directly to a particular coordination mechanism.

In the literature, the indicated relation is therefore not that clear-cut. Malone et al. (1999) therefore state that different interdependencies may require different coordination mechanisms. There is however no consensus on a particular direct relation between different interdependencies and coordination mechanisms. This is further defined by the work of Crowston (1997) that states that for a particular dependency there are several coordination mechanisms that can manage this interdependency.
2.3. Coordination of agile teams

When looking at coordination in the agile way of working it is important to recall that one of the basic underlying ideas of working agile is working in self-organizing teams (Beck et al., 2001). In order for these agile teams to function properly, they should be able to self-organize in such a way that they can achieve the objectives that the team has set (Schwaber & Beedle, 2002). Even though these teams should be able to self-organize and are able to decide what is necessary in order to achieve the set objectives, these teams should still use and conform to the existing standards and other conventions that the organization uses (Schwaber & Beedle, 2002). With the introduction of multiple agile teams, this means these teams have to deal with the interdependencies they have with other teams and parts of the organization (Dikert et al., 2016). Putting this together means that the agile teams should be able to use Scrum and self-organize in such a way that the teams are able to decide what the necessary activities are in order to achieve the objectives the team has set on the one hand. But on the other hand, these activities should be in line with other agile teams and the organization as a whole due to the interdependencies that are present.

According to Lindvall et al. (2004), this situation of more autonomy at the team level and interdependencies at the organizational level results in a need for more formal communication in the form of documents and formal meetings between agile teams. This process of formalization could however ultimately lead to lower levels of effectiveness and agility of the teams in their work activities. Stated in the agile manifesto is the fact that agile teams should focus on: working software over comprehensive documentation (Beck et al., 2001). Therefore the implementation of more formal meetings and documents could lead to opposing forces that create challenges in coordinating multiple agile teams. Therefore coordinating agile teams in such a way that they are able to self-organize and be as efficient as possible but also act in line with other agile teams and the organization as a whole remains an important challenge.
3. Methodology

3.1. Study design

To get a better understanding of how agile teams are coordinated in large organizations a single-case holistic study design is chosen for this research. What defines a case study is that it is an empirical research about a particular phenomenon (e.g. a case) in its real-world context and in which the boundaries between the phenomenon itself and the boundaries of the context are not clearly evident (Yin, 2011). Moreover, the case study is a research strategy which focuses on understanding the dynamics present within single settings (Eisenhardt, 1989).

This research design is characterized by the fact that it is flexible and able to cope with the complex and dynamic elements of real-world phenomena. Besides, it is most often characterized by the fact that multiple data collection methods such as interviews, documentation, and observations are incorporated (Symon & Cassell, 2012). According to Yin (2011), the case study research design can serve different purposes in research. This research can be categorized as a descriptive case study because the main objective of the research is to describe how inter-team coordination of agile teams is established in InSurCom in order to further develop our understanding of agile at scale in organizations.

The reason for choosing a single-case study research design is based on the work of Symon and Cassell (2012), as the researchers describe that this research design is able to understand a particular phenomenon in its real-world context. As described in the theoretical framework in chapter two, the process of inter-team coordination is an ongoing process nested in a particular organization created by a particular need to deal with interdependencies between different parts of an organization. Furthermore, the described coordination mechanisms that are a result of these interdependencies can establish coordination in many different ways in different organizational settings. In line with the purpose of this research, it is therefore important to understand the phenomenon of inter-team coordination of agile teams in the context of the organization and the dynamics that this context brings about (i.e. InSurCom).

A second reason for the application of a case study research design, is the fact this research design is able to establish a detailed and in-depth picture of the phenomenon that is researched (Symon & Cassell, 2012). In order to answer the research question, it is first of all important to get a detailed and in-depth picture of the most important constructs of the interdependencies between the agile teams in InSurCom and therefore to understand where the need for coordination between these agile teams stems from. The second step in describing how inter-team coordination between agile teams is established is describing in-depth, how coordination based on these interdependencies is established. This is particularly important because the
concept of coordination has a dynamic character. Meaning that the coordination mechanisms as described in the theoretical framework can establish coordination in many different ways and therefore an in-depth picture of the coordination mechanisms and the way in which coordination is established is important to answer the research question.

3.2. Case selection
In case study research the phenomenon or unit of analysis can relate to almost anything as Symon and Cassell (2012) describe that the only limit to the potential of case study research is the researcher’s ingenuity. It is however important to select the case in which the phenomenon is present accurately. Yin (2011) describes that the selection of a particular case should be on “clear, if not strong, substantive rationale” (Yin, 2011, p.33). In this research, InSurCom is chosen to look at inter-team coordination of agile teams. The selection of this case is based on two important requirements that were defined for the purpose of this research. The first requirement is related to the scale on which agile is implemented in the organization. Dikert et al. (2016) define large-scale agile in terms of at least 50 people or six teams that work in an agile way. In InSurCom nearly twenty teams in the Superior Customer Experience department are working in the agile way and therefore this case meets the requirement of working with agile at scale. A second important requirement relates to the concept of inter-team coordination. In order to look at the concept of inter-team coordination, the case should be composed of agile teams that are in some way related to each other in their everyday work practices. This is clearly evident in InSurCom as the agile teams in the case are centered around the objective of optimizing the customer journey of the organization. This creates a particular level of interdependence between these teams and therefore inter-team coordination to integrate the activities of these teams.

3.2.1. InSurCom
The organization that is investigated in this research is a large Dutch health insurance company. The cooperation covers different insurance labels and with over 4 million customers it is one of the largest health insurance corporations in the Netherlands. In order to provide customer-driven products and align the needs of the customers with the offer of the insurance company, the cooperation has set up a Superior Customer Experience department (SCE). This department focuses on the customer journey of all the different labels that the insurance company covers. In general, the objective of this department is to optimize the customer journey. The customer lifecycle is divided into consumers and business customers. In this customer lifecycle, different
customer objectives are set that relate to a particular agile team. This results in a setting with fourteen agile teams that focus on the lifecycle of customers and five agile teams that focus on the lifecycle of the business consumer. Besides these teams, the department consists of so-called building blocks and application integration, which operate as the processors of the website, applications and other systems of the organization.

This research focuses on the relation between the agile teams in the so-called cluster existing customers. One of the customer objectives of these teams is for example: "surprisingly easy basic processes". This objective is the main focus of the agile team that is composed in such a way that it should be able to reach this objective. The members of these agile teams have different expertise areas such as IT, social media, customer insight, and communication. The agile method these teams work with is Scrum. The team as a whole should be able to achieve the objective that they are responsible for and in this sense, these teams are relatively autonomous in how they work. However because these teams ultimately have to align the set objectives and work with the other teams, inter-team coordination is necessary. This makes the case ultimately suitable to look at inter-team coordination of agile teams.

3.2.1.1. Agile teams in the health-insurance industry

As the agile way of working is rooted in the software development industry and much of the research on agile at scale is grounded in this industry, it is important to discuss how this case differs from the agile way of working in the software development industry. Several elements can be defined that distinguishing this case from the typical “agile software development case”. Based on the work of Cockburn and Highsmith (2001) and Dikert et al. (2016) the most important distinguishing factors will be discussed.

A first important distinguishing artifact that has to be recalled is related to the main objective of the organization in which the agile way of working is implemented. InSurCom is a corporation that is concerned with providing health-care insurances to people in the Netherlands. In comparison to the great majority of large-scale agile research, which focus on software development in different applications, the case differs with respect to the main objective of the organization.

A particularly important element of the agile way of working in the software development industry is called customer collaboration (Cockburn & Highsmith, 2001). This means that the external customer is integrated into the agile team. In this definition, the customer is most of the time the external party for which the software is produced. In InSurCom this customer is embodied slightly different. The agile teams in the Superior Customer Experience department
are responsible for the optimization of the customer journey and in this sense, their main focus is the external customer. However, as these teams work on different systems such as the website, applications and other platforms their customer also includes the internal organization. Resulting in the fact that no external customer is directly integrated into the agile team.

In the agile literature, agile at scale is in most of the cases based on the fact that different agile teams have to work for the same customer (Dikert et al., 2016). Meaning that one central customer requires multiple agile teams to produce the desired working software. The main focus of these agile teams therefore relates to producing a particular software system as an output for the customer. In InSurCom this work focus is somewhat different as these teams strive to improve multiple platforms and services that the organization provides to their customers. Even though these improvements most of the times require adjustments or developments with respect to software this is not their only concern. As one of the customer mission teams is responsible for the communication to their customers, this indicates that the work focus of these teams includes more than only producing or optimizing working software.

When looking at the typical agile teams, these teams are able to conduct the whole process of software development (Schwaber & Beedle, 2002). Meaning that in the typical agile organization and agile teams, the teams should be able to reach their objectives almost completely with the resources and the experts that are located in the team. This enables them to operate autonomously with only the limitation of conforming to the existing standards and procedures that the organization has set. In InSurCom this is slightly different organized. The agile teams consist of different experts such as IT-specialists, content & communication experts and Digital, Mobile & Social experts. These experts enable them to make adjustments and functionalities by themselves. However, when the teams are working on more impactful functionalities that have a large scope on the different platforms of the organization they have to make use of the so-called building block and data-care teams. These building block and data-care teams integrate the ideas that the agile teams develop into the different systems that the organization uses and provides to their customers.

Typical agile teams are concerned with producing working software for their customers. The production process of this software that is developed, ends when the software is presented and delivered to their customer based on the Scrum cycle as discussed in the theoretical framework. Contrary to this defined endpoint in terms of time scope, the agile teams in InSurCom are focused on constantly further developing the customer journey as a whole and therefore no pre-defined endpoint is indicated. This results in the fact that the scope in terms of the time frame
of the agile teams in InSurCom is different from the agile teams working in a "typical software development" organization. Despite these distinguishing elements and the fact that the agile ideas are rooted in the software development industry, this case is suited for looking at inter-team coordination of agile teams. First of all, because the agile teams in InSurCom are work on providing functionalities on the different platforms that the organization offers and therefore their main concern is creating software for the customer. Moreover, the underlying core principles of the agile way of working, the agile methods that agile teams use, the ability of agile teams to be proficient at change and their capacity to self-organize are not bound to the software development industry alone. This is further substantiated by the work of Dikert et al. (2016), that found different practitioners reports of agile at scale in the Telecommunication, Banking and Healthcare industry.

3.3. Data collection
In order to get a detailed picture of how inter-team coordination between agile teams is established in InSurCom interviews and observations were conducted. These data collection methods will be discussed in the following sections.

3.3.1. Semi-structured interviews
In order to describe how inter-team coordination between agile teams is established in InsSurCom, qualitative interviews were conducted. The main objective of these interviews is to establish a picture of the research topic through the perspective of the interviewee and more important to understand how and why the interviewee has this particular picture of the research topic (Symon & Cassell, 2004). In order to establish this picture, semi-structured interviews were conducted. The first reason for choosing semi-structured interviews is the fact that the interdependencies between agile teams can include many different elements. When looking at the different elements of interdependencies as described by Malone and Crowston (1994) it becomes clear that several elements can construct a particular interdependency. Shared resources could for example entail many different elements such as an actor’s time, space, budget etc. It is therefore of great importance to get a very detailed picture of what these resources encompass and what makes them an interdependency. In line with this, Malone and Crowston (1994) state that the list of interdependencies is in no way exhaustive. Meaning that other elements can construct a particular interdependency between two agile teams as well. By conducting semi-structured interviews it becomes possible to get a clear picture of what
constructs are included in a particular interdependency and what makes this a dependency. Besides, the structure of the interview enables the respondent to highlight other constructs of interdependencies that were not directly addressed in the interview guide.

A second reason for choosing semi-structured interviews is because coordination mechanisms as discussed, often comprise of a formal and an informal component that is not stated in a document or work description. In the work of Okhuysen and Bechky (2009), this is described in terms of different ways in which coordination mechanisms can function or perform the actual coordination function. These different ways in which these mechanisms function is best captured by conducting interviews as this data collection methods can provide more detailed information on how the coordination mechanisms actually execute the coordination function.

Semi-structured interviews were conducted with five agile mission leaders, two cluster leaders and an agile coach of the organization. The mission leaders of the agile teams are responsible for the objective that the teams strives for and have the responsibility to align the activities of their team with the work of the other agile teams. Due to this responsibility, the mission leaders were chosen to be interviewed because they should be able to describe the interdependencies and the way in which these interdependencies are handled between their agile team and other agile teams. The so-called cluster leaders are responsible for the cluster of customers and embody an overarching position that is responsible for the work activities of all the agile teams in that particular cluster of customers. The main reason for the selection of the cluster leaders for this research is because they are able to see the overarching picture of all the agile teams in the cluster of customer and should be able to describe how all the different agile teams are related to each other in order to form a complete customer journey. Lastly, an interview was conducted with an agile coach of the organization to get more detailed information about the agile way of working and how this relates to inter-team coordination of agile teams in InSurCom.

By conducting interviews with the agile mission leaders the interdependencies between different teams were indicated. During these interviews, a clear picture of how the particular team is positioned in the department was made explicit. After this, the different relations the team has with other teams was questioned. In this, the constitutive elements of Malone and Crowston (1994) were used to structure the interview, as will be discussed in the operationalization section. After the different relations between the particular team and the other teams in the department were made explicit, the way in which the work of the team was aligned with the other teams was discussed. This means that this part of the interview started with open-questions regarding the alignment of the activities of the team with other teams. Then
more specific questions regarding the coordination mechanisms of Okhuysen and Bechky (2009) were discussed. During the interviews with the cluster leaders more specific question regarding the roots of the different relations between the agile teams were addressed. After getting into more detail about the different relations, questions regarding the alignment of the different teams were addressed to see how all the different teams are aligned and are able to form a complete customer journey despite their high level of autonomy. During the interview with the agile coach of the organization more specific question regarding the agile way of working were discussed to see how coordination is handled in the agile way of working.

3.3.2. Participant observations

Besides interviews, two full days of observations were conducted to further enrich the data on the coordination of agile teams. Participant observation is a specific approach to the gaining of knowledge, based upon direct contact between the researcher and the social object of interest (Symon & Cassell, 2012). This data collection technique is able to capture the lived experience of a particular social phenomenon (Symon & Cassell, 2012). The fact that this method has the ability to capture the lived experience is also seen as the most important limitation of this method. Due to the fact that the participant is in direct contact and therefore in some way related to the object under investigation many researchers argue that this form of data collection is subject to a great amount of subjectivity (Symon & Cassell, 2012). In order to stay as close to the objective nature of the phenomenon under investigation, in this research the role of the complete observer is chosen. This role characterizes itself by the fact that the participator does not engage with the participant (Gold, 1957). This role is chosen for two reasons. First of all the QBR meeting, during which the observations were conducted, is a crucial event for InSurCom. Meaning that interruptions with the participants were not desirable for InSurCom. The second reason for choosing this role during the observations is the fact that this role enables the researcher to focus fully on the activities and actions under investigation.

The QBR meeting is a two-day event in which all the different agile teams come together and discuss their plans in terms of features and epics that they are going to work on in the upcoming quarter of the year. During this event, the agile teams discuss what the work activities of the upcoming quarter will be and how the work that they have planned will be realized. A central element of this meeting is mapping the different relations the teams have with each other.

Observations were conducted to first of all further enrich the data gathered from the interviews. By conducting observations a more detailed picture of the different interdependencies between the teams was created. Besides, it enabled to observe the QBR meeting which was indicated as
one of the central coordination mechanisms in InSurCom. A second reason for choosing observations for this research, is the fact that coordinating work activities is a process and being able to see this process further enriches the gathered data.

Before the observation, a list of the different agile teams that were included in the research was prepared. By this, indicating the different agile teams and space to make notes about the observed interdependencies. In order to get as much relevant data as possible from the observation, a clear goal for the observations was set up front. The main goal of the two-day observation was to get a clear picture of the different interdependencies between the selected teams. In this focusing on the different indicators as framed in the operationalization. Besides focusing on the different interdependencies, the goal of the observation was to better understand the QBR meeting as one of the crucial meetings in establishing inter-team coordinating.

3.4. Operationalization

The operationalization of the concepts discussed in the theory is structured in line with the theory of Thompson (1967). First of all the different interdependencies based on the work of Malone and Crowston (1994) were classified and subdimension were created. Secondly, indicators for each dimension were selected. As the subdimensions of the interdependencies were defined the same process was conducted for the different coordination mechanisms as stated by Okhuysen and Bechky (2009). This results in the operationalization structure that can be found in Appendix 7.5. This operationalization structure was used in order to develop the interview guide. Resulting in the interview guide that can be found in Appendix 7.1 – 7.3.

3.5. Data analysis

In order to develop a clear chain of evidence the first step in the analysis process is based on the procedure as described by Miles and Huberman (1984). The researchers split the process of qualitative data analysis into the reduction of data, the schematic projection of data and abstracting conclusions from the found analysis in order to ultimately verify the found conclusions. After the data was structured the data was further analyzed based on the guidelines of template analysis. Template analysis is a style of thematic analysis that balances a relatively high degree of structure in the process of analyzing textual data with the flexibility to adapt it to the needs of a particular study (King, 2012). The central part of template analysis is that it uses a template which is used to further apply the collected data.

The most important reason for choosing template analysis is of its flexible character. Because this research focuses on a very specific object, flexibility is of great importance. This means
that a structure for the data analysis process is provided but there is enough flexibility for the data to unfold. A second reason for the use of template analysis is that it allows the researcher to define a-priori themes (Symon & Cassell, 2012). This enabled to use the concepts described in the theoretical framework in a sensitizing way and this further structured the analysis process. The data analysis process is constructed based on a code table. This means that the separate interview transcripts and observational notes were read and the first codes were identified. The observational notes were analyzed by using the same codes as used in analyzing the interviews. When these first codes were identified, themes were constructed based on the found codes in the separate interview transcripts and the observational notes. With the construction of these themes, it became possible to first of all group and integrate the data from the different interviews and observational notes and second of all to include the found themes in the earlier mentioned code table. Because template analysis has no pre-set number of coding levels that should be indicated, these themes were analyzed and with the help of the code table, higher order themes were identified. These higher order themes were compared with the a-priori themes resulting from the theory. The resulting top-level themes were reviewed and the final code-table was constructed and can be found in Appendix 7.4.

In order to analyze the relation between the different dependencies and the coordination mechanisms, the coordination mechanisms and interdependencies were analyzed in the scope of a particular relation between two or more agile teams in which they were indicated. By taking as a starting point a particular relation between two or more agile teams it became possible to group the different interdependencies that were indicated in this relation between these teams. The second step in this analyses process was grouping all the coordination mechanisms that were indicated in this same relation between these agile teams. Resulting in an overview with all the different interdependencies and coordination mechanisms that were identified in a particular relation between two or more agile teams. The last step in analyzing the relation between the different interdependencies and the used coordination mechanisms was established by looking at each coordination mechanism in a particular relation between two or more agile teams and in which situation this coordination mechanism was used based on what interdependency. This enabled the analysis process to produce the results as indicated in the results chapter.

3.6. Research ethics

Research ethics is an important aspect of doing research in general and especially in a case study research. In this chapter, the most important ethical considerations will be discussed based
on the work of Ritchie et al. (2013) and Symon and Cassell (2012). The following ethical considerations will be discussed in the remainder of this section: Informed consent, Anonymity and confidentiality, Feedback and the Role of the researcher.

3.6.1. Informed consent
Informed consent is the first important ethical factor to be addressed. As in any research situation, consent must be obtained from the participant included in the research. This means that the people included in the research should be provided with the right and adequate information such that they are able to make an informed decision on whether to participate in the study or not (Ritchie, Lewis, Nicholls & Ormston, 2013). Ritchie et al. (2013) further indicate that informed consent should be balanced in such a way that participation is enabled. Meaning that the right amount and adequate information should be provided in such a way that there is no information overload that could potentially disable the participation. In order to conform to this core principal different steps were taken in the course of this research. These different steps were included because Ritchie et al. (2013) state that informed consent is more of a process than a static object that has to be accomplished. Therefore first of all permission for the research in InSurCom was permitted by conducting conversations with the contact person of the organization. In these conversations, the core idea, the required data collection and the time span of the research were discussed. When permission for the research was acquired via the contact person an email was sent to the people included in the research providing them information on the research question, the objective of the study and for what purpose the research was conducted. Lastly, the participants were provided with a document including the following information based on the work of Ritchie et al. (2013): purpose of this master thesis research, the researcher, how the data will be used, what participation will require from the participant, the subjects that will be covered and how much time is required from the participant.

3.6.2. Anonymity and confidentiality
Anonymity and confidentiality is another central element in doing research and more specifically doing qualitative research. In its core, this means that the researcher should execute all the possible measures to assure the confidentiality and anonymity of the participants in the research (Ritchie et al., 2013). Anonymity and confidentiality in the research are located in two different levels of this research. First of all the data collected from the organization is confidential and leaking this information outside the organization could be harmful for the
organization. Second of all, the research includes interviews with people from the organization and their anonymity should be ensured as their information could be sensitive if presented to their managers for example (Singer & Vinson, 2002). To overcome this ethical issue on the organization level the data that is collected will be kept safe on a USB-stick. Besides, the research does not state the name of the organization in the research so that anonymity can be established. To overcome the issues on the employee level of anonymity the participants were first of all clearly informed about the purposes of the research and what was done with the gathered data. A second measure that was taken to establish confidentiality and anonymity was the exclusion of any names or indication that could be linked to the participant. The last measure that was taken in the course of this research was providing the participants the opportunity to provide feedback on any statements that were made during the interviews that were conducted.

3.6.3. Research in the employing organization
The last ethical consideration that will be discussed is related to the position of the researcher in the organizations under study (InSurCom). Doing research in the researchers’ employing organization brings about different ethical issues that should be addressed. Symon and Cassell (2012) state that in this type of situation an important consideration must be made about the role of the researcher in the research context and how this shapes the creation of knowledge. This is embodied in the concept of reflexivity which challenges the possibility of the researcher to be completely neutral and states that the biography of the researcher always informs the research in some way (Symon & Cassell, 2012). A second ethical issue that this situation brings about is related to the relationship between the researcher and the researched. Meaning that people as research objects included in the research cannot be seen solely as information generators and the researcher is not a neutral collector of information (Symon & Cassell, 2012). This is a very important ethical consideration in the scope of this research due to the fact that InSurCom is my employer and therefore the relationship between the researcher and the researched is already defined to some extent.

In order to deal with these ethical issues, the following steps were taken for this research based on the work of Symon and Cassell (2012). First of all the researchers state that honesty and awareness about the indicated position is crucial. Therefore all the participants included in the research are informed about my position in InSurCom so that full honesty and transparency about my role in the organization is provided. More specific this means that the participants are informed about the two roles (i.e. the role of researcher and employee) that I embody in the organization. In this, clarity is provided about how these two roles are separated from each
other. A second measure that was taken to overcome the indicated ethical issues is to constantly discuss ideas and found results with peer researchers. This process of discussing can contribute to keeping the biases related to my position in the research context, that will always be there in some form, as small as possible.
4. Results

This results chapter will, first of all, introduce the work focus and a detailed description of the different agile teams in the cluster existing customers of InSurCom. After this introduction, the relatedness of the agile teams will be made more explicit. The starting point of this relation is the interdependency that creates a particular relation between the teams. Dealing with a particular interdependency in InSurCom can be seen as a process in which different coordination mechanisms are used in order to establish coordination of work activities between these teams. This implies that particular coordination mechanisms can be used to deal with different interdependencies. Therefore the coordination mechanisms will be described in their relation to a particular interdependency. The following section will describe how each interdependency is dealt with, by the application of different coordination mechanisms.

4.1. Work focus of the agile teams

The agile teams in the cluster existing customers focus on optimizing the customer journey of InSurCom. This means that they create and improve the functionalities that InSurCom offers its customers on the open-website, the personal my environment, and the mobile application. The open website is the central place for customers to acquire information about the health-insurance products, terms related to the health insurances and other functionalities that InSurCom offers. The personal my-environment is a secured environment on which customers can see and make adjustments with respect to their personal health care policy. The mobile application is an extra tool that the organization offers to its customers and is comparable with the secured my-environment formatted in a mobile application. The mission leaders of these agile teams are the product owners who are responsible for the products that they create on these platforms. Products in this connotation can include minor improvements or totally new functionalities to one of the indicated platforms that are provided to the customer. The functionalities that the teams create and come up with are called Features in InSurCom. Besides features the organization makes use of the term Epics, referring to the larger functionalities and products that these teams produce in order to improve the customer journey.

4.2. Agile teams in the cluster existing customers

The agile teams in InSurCom are constructed around a particular objective that is the central focus point for the particular team. Due to their earlier discussed focus on the customer journey, these teams are often called the "customer mission teams". First of all, a proper description of the different agile teams will be provided.
Agile team C1

The first agile team is the customer mission team C1. This team is responsible for the fundamental processes that are provided to the customers. These fundamental processes are the non-healthcare related processes. These fundamental processes are grouped in the following central objective of this team: “I experience surprisingly easy fundamental processes and clear correct information regarding my policy and health insurance premium”. These processes can be divided into three overarching categories that cover the responsibilities of this team. The first category of activities is related to making changes to the health insurance policy. This means providing customers the opportunity to adjust their health care packages at the end of the year in the my-environment of InSurCom. Besides changes in the health care packages, this team is responsible for the adjustments regarding customers' bank account number, residential address or other non-health related issues. The second category that the team is responsible for are the processes around the payments that customers have to make. These payments can be divided in terms of the health insurance premiums that the customers have to pay and all the other additional health-related payments. The third area in the customer journey the team works on is the information regarding the health insurance policy. This is all the information about the current health care policy of the customer and the information regarding the new health care packages for the upcoming year.

Agile team D1

The customer mission team D1 is responsible for the information regarding the compensations that the health insurance covers in the basic insurance policy and the additional health care policies that a customer can take. Besides the information regarding the compensations itself, this teams is also responsible for the budgets that customers make use of during the year. This results in the following central objective for agile team D1: “I experience beforehand surprisingly easy processes around insight in compensations”. The information that this team provides is displayed on different channels that InSurCom offers to its customers. On the open website, the team provides information about the different health insurance policies that the corporation offers. On the secured my-environment this team provides more personal information about the compensations that the particular policy of the customer covers. This environment also provides information about the budgets that the customers have used during the year. The same applies to the mobile application that displays the specific and personal health care compensations that the particular policy of the customer covers. The last channel on which this team provides information regarding the compensations of the health insurance is
the chatbot. This chatbot offers customers the opportunity to ask questions with respect to their health insurance policy. In order to achieve the central objective, this team is constantly looking for new ideas to make the information about compensations more clear and understandable for customers by creating new functionalities on one of the indicated platforms.

**Agile team C2**

Customer mission team C2 is in terms of work activities somewhat different from the other agile teams located in this cluster of agile teams. Whereas the other agile teams in the cluster focus on creating and improving functionalities on the different platforms that the organization offers to its customers, the focus of agile team C2 is on the year-round communication to the existing customers of InSurCom. The central objective that this team strives for is formulated in the following way: “I get surprisingly handy general information and useful tips from my health insurer”. General information and useful tips in this central objective are categorized in different sub communication areas. The first type of information focusses on the products and services that InSurCom offers to its customers. In this, products relate to the health care policies that InSurCom offers to its customers and services are for example the possibility that the organization offers to its customers to get advice about health care providers. The second type of communication that the team is responsible for is informing customers about the new functionalities that the organization offers. This in line with their task of stimulating customers to make use of the digital and mobile channels that the organization offers. Lastly, the team is responsible for getting in touch with customers that do not make use of health care. Altogether the activities of this team can be summarized as year-round communication to all the existing customers of InSurCom.

**Agile team D2**

Customer mission team D2 is responsible for the processes that customers have to deal with after they have received health care. These processes are related to declarations that customers can submit when they have received health care and all the processes and information related to the payment of health care invoices. As these processes are personal for every customer the main focus area of this team is the my environment and the mobile application of InSurCom. This is translated in the following central objective for the team: “I experience surprisingly easy processes around declarations and compensations”. The first area in the customer journey this team is responsible for is the submission of declarations after customers have used health care. This means that this team is responsible for creating functionalities that make it easy for
the customer to submit declarations and receive the compensations that these declarations cover. Besides this process of submitting health care declarations, the team is responsible for providing insight in all the health care that is declared by health care providers for the particular customer. As a result of the declared healthcare by health care providers, this team makes sure that the customer receives health care invoices on which the customer can see for what received healthcare they have to pay. Furthermore, this team works on making it as easy as possible for customers to pay these health care invoices on the platforms that InSurCom provides. The last area of the customer journey on which this team focusses is the own risk that customers have to pay when they receive health care that is covered in the basic health care policy. Altogether these processes are gathered in the part of the customer journey that focusses on the processes after customers have received health care.

**Agile team E**

The customer mission team E is responsible for developing solutions that guide customers through the complex health care process. This means that the team is responsible for creating a concerned first point of contact when customers need health care. Important to mention is that this team is up and running for only two months (June 2018). The activities of this team are centered around the following objective: “*I consider my health insurer as my personal guide in a complex healthcare world*”. The notion of a personal guide means that the team mainly focusses on creating a new search engine that customers can use to look for health care providers. Besides the new search engine, the team is developing a similar tool for the healthcare guide related to long-term care. These functionalities should help guide customers to health care providers that are considered by the organization as sound health care providers. Another important area this team focusses on is facilitating the possibility for customers to provide feedback and reviews about health care providers.

**4.3. Coordinating interdependencies between agile teams**

The agile teams in the cluster ‘existing customer’ of InSurCom work together on the creation and improvement of the customer journey for existing customers of InSurCom. The customer journey is split up in different area’s and each team has its own area and objective. Together the teams are responsible to optimize the whole journey of existing customers. The relation between the teams is based on different interdependencies. The following section describes the different interdependencies between the agile teams and how they are coordinated within InSurCom.
4.3.1. Task/subtask dependencies
The different central objectives of the agile teams discussed in the previous section are gathered and constructed around seven central objectives for which these teams are together responsible. In order to better understand the relatedness of these teams with respect to the overarching objectives that they strive for, the seven central objectives will be discussed and explained below:

**Soft customer steering** - This objective refers to the fact that the teams should contribute to the decrease of healthcare costs, by actively applying soft customer steering methods, causing policyholders to get stimulated to go to sound health care providers. The objective is measured by the number of successful steering conversations of the customer service department, including the department healthcare advice and mediation, and the number of clicks on the detail pages of sound health care providers.

**Transactional NPS** – Transactional NPS relates to the improvement of the reputation of InSurCom, expressed on a transactional level, measured in the intention of the recommendation of policyholders. This objective is measured for three different interaction channels: the app, chat and customer advisor. The target is measured by sending a short customer survey to customers after they have used one of the communication channels. The TNPS is calculated by the number of promoters distracted by the number of detractors. The agile teams should contribute to this goal by creating functionalities that customers consider as user-friendly and easily accessible.

**Number of app-users** - This objective strives to increase the number of registrated app-users to 350,000. The purpose is to create a higher level of digitalization which will result in the realization of lower operating expenses. In order to reach this objective, the agile teams should further improve the functionalities on the mobile application such that more customers download and make use of this application. The objective is measured by the number of downloads and registrations of the mobile application by policyholders.

**Number of chat conversations** - This objective strives to increase the number of chat conversations to 60,000, for the purpose of digitalization and realization of lower operational expenses. Chat conversations are measured in terms of chats that are conducted with employees of the organization, excluding conversations with the chatbot. By continuously improving functionalities on the open-website, the agile teams should contribute to the increase in the number of chat conversations.

**Percentage of principal insured digital** - Policyholders can choose to have their correspondences digital or by post. This objective strives to increase the number of
policyholders with a digital post preference, for the purpose of realizing lower operational expenses. The agile teams should contribute to this objective by further digitalizing and optimizing the customer journey on the different platforms of InSurCom.

**InSurCom ratings Caremap Netherlands** - This objective focuses on the number of patient ratings and reviews about health care providers on the Caremap of the Netherlands, which are realized based on the efforts that InSurCom has delivered. The objective strives to achieve 25,000 ratings on the Caremap Netherlands per quarter 4 of 2018. In order to reach this objective, the agile teams should further optimize the search mechanisms that the organization offers its policyholders when they are looking for healthcare providers.

**Contact reduction** - Contact reduction strives to reduce the number of contacts with 700,000 (575,000 calls and 125,000 e-mails), in order to reduce the operational expenses of InSurCom. This objective is measured against the number of calls and e-mails of 2017. In order to reach this objective, the agile teams should optimize the different platforms of InSurCom to such an extent that additional questions, either by phone conversations or e-mails, are not necessary anymore.

4.3.1.1. Cluster objectives and team objectives

Due to the fact that the teams in the cluster are set up in such a way that they are each responsible for a particular part of the customer journey, they are all related to each other to some extent. More specifically, this means that the different teams in the cluster are responsible for the same overarching objectives, as described in the previous section but work from their own focus area (in the customer journey) to make these objectives happen. Each team has its own objectives but also has to contribute to the seven central objectives as stated above. This is best summarized and described by respondent A: “We have, with a number of teams, common objectives, so all the customer mission teams within the cluster existing customers have the same objectives.” She subsequently stated: “So there we have a relation on objectives, in the sense that we are together responsible for them, everyone from their own roles.” (Interviewee A, mission leader). This relation causes the teams to sometimes conduct a particular task that does not directly contribute to the objectives of the team but is important for achieving the overall objectives of the cluster. The task/subtask relation between the agile teams is therefore constructed by the overall cluster objectives as the central task the teams work on from their own team objectives which are the subtasks in this construct.
4.3.1.2. Overlapping team objectives

The teams each work on their own part of the customer journey. Some parts are however strongly related, which shows their interdependency towards the achievement of shared objectives. This relatedness is best described by the work activities of agile team C1 and agile team D2. In which agile team C1 is responsible for the fundamental processes around the policy and insurance premiums, and agile team D2 takes care of the processes around the declarations and payments of these compensations. Together these two teams focus on the payments that customers have to make with respect to their health care policy. In this part of the customer journey agile team, C1 takes care of the monthly premium insurance and agile team D2 works on the declarations that customers have to pay. This results in a situation in which both teams share a financial work area, even though they each focus on their own specific part of the customer journey. More important in this relation is the fact that the activities of one team influence the activities of the other team. When agile team C1 adjusts something in the way customers can pay their healthcare premium, this will affect the overall usability of doing payments. As the payments of healthcare invoices are the responsibility of agile team D2, their work activities will be directly affected. So both teams focus on making payments user-friendlier. Even though their tasks are related to another part of the customer journey, they strive for the same objectives, which makes the teams interdependent to each other in terms of tasks that construct the shared objective.

4.3.2. Coordinating the task/subtask relation

Coordination the task/subtask relation between the agile teams relates to the mechanisms that create alignment between the different activities of the teams that together construct the overall cluster objectives. Due to the constantly changing character of these activities, dealing with the task/subtask interdependency requires several coordination mechanisms. In the proceeding section, the different coordination mechanisms that are used to deal with this interdependency will be described.

4.3.2.1. Strategic canvas

In order to deal with the task/subtask relation between the agile teams in the cluster ‘existing customers,’ the teams were provided with a strategic canvas when they were set up. This canvas is best described as a blueprint on which the main objective of the team and how to accomplish this main objective is described. Furthermore, this canvas provided the teams with information regarding their team composition, responsibilities in the customer journey and their team goal.
Even more important is the fact that this canvas described for what part of the customer journey the teams are responsible and this made the first formal divide in the customer journey. This assignment of responsibilities for the particular teams was especially important for the teams in their early stages, as there were a lot of demarcation issues. Teams that have overarching objectives as the example of agile team C1 and agile team D2 who both take care of payments described, used the canvas to check which activities could be assigned to the responsibility of what team. The respondents indicated that during the course of time, the use of this visual plan became less pivotal. However, by the use of these canvasses work activities and responsibilities related to the overall task of optimizing the customer journey were defined and assigned to the teams.

4.3.2.2. Demo meetings

Part of the vast work rhythm that is integrated into InSurCom is the demo meeting that takes place every three weeks. These three weeks are called ‘sprint periods’ and are accessible for everyone in InSurCom. The demo meeting is a point in time in which the agile teams present to their stakeholders what they have done in the past three weeks and discuss the set of activities they are going to work on in the upcoming sprint.

The most important function of these meetings is indicated by respondent C who explains that these meetings mainly function as the first trigger for establishing alignment. He explains that these meetings do not create the possibility to really go in depth about a particular issue but due to the fact that during the demo meeting the agile team presents their set of activities that the team is going to work on in the upcoming sprint, this enables the mission leaders to see whether there are interfaces with his or her own team’s activities in the customer journey. Whenever these activities are closely related they can start working on these activities together and therefore the demo meeting is indicated as a trigger-moment collaboration.

Besides the possibility for the mission leaders to see the interfaces between work activities, the demo meeting enables the cluster leader to monitor the work activities of the teams. During the last part of the demo meeting, in which the activities of the upcoming sprint are presented, the cluster leader is able to discuss these activities and whenever necessary redirect these activities towards the objectives of the cluster. Therefore the demo meeting enables the cluster leader to monitor the work activities of the different teams and direct the teams’ work activities towards the objectives of the cluster whenever necessary.
4.3.2.3. Role of mission leader

The role of mission leaders in its core means, that this person is responsible for achieving the central goal that is set for the team and contribute to the overarching objectives of the cluster. The objective of the team is divided into work activities called backlog items for which the mission leaders are responsible. The backlog of the agile teams embodies the set of activities that the team is going to work on in the upcoming sprint periods. As a result of the fact that the mission leaders are responsible for the backlog of the team, they decide with what set of activities the team is going to accomplish the overall objective that is set for the particular team. In this road towards achieving the overall goal of the team, the mission leader has to make sure that he or she is knowledgeable about the activities of the other agile teams in the cluster existing customers due to their relatedness based on the customer journey. Respondent H describes this role therefore as the liaison officer (Interviewee H, cluster leader) in the alignment of work activities of the different agile teams in the customer journey.

This role of liaison officer becomes more pivotal when two teams have to work together on a particular feature or epic, which are the functionalities the teams create for the different platforms. In this collaboration the mission leader functions as the first and most important contact person. During this collaboration, the focus of the mission leader is on the bigger picture of the activities and what the focus of the other teams will be so that alignment can be established. Respondent D recalls this by stating: ‘’No no, I sometimes discuss things with their mission leader but that is more about the bigger lines of what they are planning to do and what we are intended to do.’’ (Interviewee D, mission leader). This means that the role of mission leader is an intergroup role that creates the information generation between the different activities of the teams in the cluster existing customer. By this information generation process, a common perspective with respect to the activities that needed to be completed to ultimately achieve the objectives of the cluster is established.

4.3.2.4. Rules

In the earlier indicated road towards the objective that is set for the team, the mission leader should act as if he or she is an entrepreneur. This is formally described in the job description of the mission leader. This does however not mean that the mission leader is able to decide freely what activities will be performed by the team. One of the most important rules in the alignment of the task/subtask relation between the different teams is the fact that the mission leaders are obligated to inform and incorporate stakeholders in the ideas and functionalities that they generate. Even if these functionalities can be created and produced solely by the team, the
mission leaders have to inform the different agile teams that can be affected by this functionality in the cluster. This is however not always that clear-cut because some functionalities that are created by the teams do not compel them to inform other teams as these functionalities do not directly affect the other teams. Informing other teams is something that is however informally defined by the fact that the different mission leaders expect that whenever another team starts with a particular functionality that affects their work, they will be informed about this. The main coordinating function that this rule brings about is the fact that it develops agreement about the way in which work activities related to the objectives of the cluster are conducted and alignment of these activities is established.

4.3.2.5. Role of cluster leader

As discussed earlier, the activities of the different agile teams in the cluster existing customers are guided and steered towards achieving the overall objectives that were set for the cluster. In this relation, the mission leader keeps track and is responsible for the objectives that are specific to their team. In order to align these different objectives of the agile teams into one central customer journey, a cluster leader is integrated into the department. The cluster leader is responsible for the cluster objectives as described in the first part of the results section. In this, it is important to note that the objectives that are set for the cluster and the teams in the cluster existing customers are static, meaning that they do not change in the course of the year. The activities that ultimately should construct and contribute to these objectives however constantly change. This is reflected by the fact that the agile teams constantly come up with new functionalities and improvements in the customer journey.

In order to keep these activities in line with the objectives of the cluster, the cluster leader has a key role. First of all, the cluster leader tries to inspire the agile teams to come up with ideas that contribute to their own team objective but more important to the objectives of the cluster. Besides inspiring the teams to come up with ideas that contribute to the cluster objectives, the cluster leader is constantly looking to direct the work activities of the agile teams towards these cluster objectives. In the course of time, the cluster leaders can see the progress on these cluster objectives and is able to decide on which cluster objectives the focus should be. This means that the cluster leader is essential in determining the priority of the cluster objectives and therefore the activities related to these objectives. This was clearly evident in the course of this research as the central goal call reduction as described in the first part of the results section was running behind on schedule and therefore the agile teams were directed towards activities that contribute to this cluster goal. Respondent H describes this in the following way: “So then I say
yes guys, I think call reduction is running behind, we need to do many other things but I want all the effort on this the upcoming quarter” (Interviewee H, cluster leader).

The role of cluster leader therefore coordinates the task/subtask relation between the agile teams in the cluster existing customers by monitoring the activities of the teams to see whether they are contributing to the cluster objectives. If these activities needed to be redirected, the cluster leader steers the mission leaders who are responsible for the set of activities of the team towards these objectives. In this sense, the role of cluster leader coordinates the task/subtask interdependency by monitoring and updating the activities of the agile teams towards the cluster objectives.

4.3.2.6. Cluster meeting
The cluster meeting is a weekly consultation in which the mission leaders of the agile teams in cluster existing customers come together to discuss their progress and impediments in the creation of the epics and features of their team. By discussing their progress on the epics and features that the teams are working on this meeting enables the mission leaders to keep track of the activities of the other teams. This creates the opportunity to see the interfaces between the teams in terms of work activities they are working on. Central during this meeting with all the mission leaders of the agile teams is discussing the performance on the cluster objectives the teams together strive for. This means that every mission leader should describe the performance of his or her team on the objectives that were set. If necessary, this meeting enables the mission leaders to softly redirect the activities the teams are working on in order to keep alignment between team and cluster objectives.

Altogether this means that the cluster meeting can be seen as a facilitating moment in which the activities of the teams related to the objectives of the cluster are challenged and progress on these activities is discussed. In this discussion, the mission leaders are able to see the interfaces of their work activities with other teams in the cluster and how these activities together construct the cluster objectives the teams are working on. And the cluster leader is clearly able to monitor the work activities and progress that is made on the cluster objectives by the different teams in his cluster and update these activities whenever needed.

4.3.2.7. Informal meetings
In the course of time as the different teams are working on their features and epics, several informal meetings take place in order to establish agreement about the work activities that needed to be executed. In contrast to the earlier discussed demo meetings and cluster meeting,
informal meetings are the consultations that are not structurally planned but created ad hoc by the different teams. Informal meetings enable the teams to really go in depth about a particular issue in the creation of the features and epics. Whenever two or more teams are working on the same part of the customer journey this kind of meeting becomes crucial in establishing alignment between the activities of the different teams. In the task/subtask relation between the agile teams, these kinds of meetings enable the mission leaders to really go in depth about responsibility demarcations in the customer journey.

During these informal meetings, the mission leaders are able to see the set of activities the other team is working on and is planning to work on and discuss which activities affect the set activities of their own team. This coordinates the task/subtask relation as these informal meetings enable the mission leaders to generate information about the work activities of the other teams and based on this information to align their own activities accordingly.

4.3.2.8. TFS-system

In order to construct a clear structure in the work process of creating epics and features, the teams use a TFS-system. This system is a tool of Microsoft that in its core focusses on requirement management and project management. In this system, the teams indicate their product backlog items. These are the building blocks in terms of specifically defined activities that needed to be conducted in order to realize a particular epic or feature. This system visualizes these items with their related customer value and to what objectives they contribute. Furthermore, the system indicates the progress on these items and indicates what the planned activities of the teams are. By visualizing the activities, progress on these activities and how the activities contribute to the objectives of the cluster is made explicit. This system, therefore, provides a rich amount of information for the teams. As the agile teams are constantly looking for new features and epics that ultimately construct the objectives of the cluster, this system, first of all, can be seen as a scaffolding for all the activities of the agile teams that ultimately construct the cluster objectives. The main coordinating function of this representation is however, the fact that it directly shares information about the activities of the teams. Moreover, the system enables the members of the agile teams to constantly see what the set of activities the other teams are working on and how these activities contribute to the team and cluster objectives. By this information sharing process, the alignment of activities of these teams is facilitated by creating a clear picture of the construction of the objectives and their related tasks. The respondents however indicate that the TFS system is mainly used for internal team purposes. The reason that this system is not directly used for creating alignment between the
teams relates to the fact that when people really want to know on which activities a particular other team is working they prefer walking by and generate information by talking in person as this provides more in-depth information.

4.3.3. Shared resources

The customer journey of InSurCom is mainly digital, and the optimization of this journey means improving and providing new functionalities on the different platforms that the organization offers to its customers. These platforms include the open website, the secured my-environment and the mobile application that the organization offers to its customers. The agile teams in the cluster ‘existing customers’ are constantly looking for improvements on the different platforms, and try to develop new solutions in such a way that these platforms are customized to the desires of the customers. When the improvements have a minor technical impact, meaning that it is just a small adjustment or addition of a particular information section, the teams can perform the improvement by themselves. Each team has its own IT-specialists to do so. When the improvement includes a completely new functionality, such as the launch of a live chat functionality, different systems and therefore different teams who control and are responsible for these systems should be asked to integrate this new functionality. The teams in the cluster all want to integrate and improve functionalities to the different platforms, creating a situation in which the experts that integrate and control the different platforms become a shared resource that is constantly over-asked. The time of the experts and the capacity in terms of workload that these experts can handle has to be shared between the different agile teams. The following experts are a shared resource for the agile teams in the cluster ‘existing customers’ because they manage, create or integrate the more impactful improvements and functionalities that the agile teams come up with:

**Building block web team** - The building block web team is responsible for the technological development and innovation of the open website of InSurCom. They make sure that that the web environments are constantly updated and in line with the requirements of the organization. Besides the responsibility of this team to keep the web environment of the organization updated and innovated whenever needed, they also create the building blocks for the agile teams. This means that they create web components for the open website and the secured my-environment that are necessary for the customer mission teams to give substance to these components that are in line with the wishes and desires of the customer. In order to integrate the functionalities that the agile teams create the time of these experts is required.
Due to the fact that all the different agile teams want to integrate new functionalities on the website, the experts located in these teams are a shared resource for the agile teams.

**Building block App team** - The building block App team is responsible for the realization of a superior customer experience in the mobile application. The agile teams provide the building block App team with suggestions on how to improve the mobile application. The agile teams share the capacity of this building block when they want to make improvements in the mobile application of InSurCom. Each team is responsible for their own part of the customer journey and therefore will provide suggestions and focus on their own part of the customer journey within the mobile application.

**Application integration team** - Application integration is best described as a team that is responsible for the disclosure of the different ideas and features that the agile teams want to launch. This process of disclosure can be seen as a middleware component that is necessary for the launch of a new functionality. Due to the fact that all the new functionalities and ideas have to get through this middleware component, this team is dealing with the situation in which they are over-asked by the different agile teams because all the teams want to get their functionalities and ideas live on the platforms.

4.3.4. **Coordinating shared resources**

In order to coordinate the limited capacity of the experts’ time in the building block web team, building block app team and application integration team, different coordination mechanisms are in place. The following sections will describe how the time of these experts is coordinated by a process of defining, inventorying, prioritizing and planning. In this process the QBR-meeting takes a central role, therefore the different coordination mechanisms incorporated in this meeting will be described.

**4.3.4.1. Epic development and Refinement sessions**

The process of dealing with the limited time of the experts in the building blocks and application integration teams start with defining the epics the teams are going to work on in the upcoming quarter of the year. The development of these epics is done during the epic development session that takes place every three weeks. These sessions are a vast integrated part of the Scrum way of working that these teams use in order to structure their work activities. After these epic development sessions are conducted, refinement sessions are in place to further define the planned epics for the upcoming quarter of the year. These refinement sessions are organized as a run-up to the QBR meeting and during these refinement sessions, the agile team discusses
what kind of functionality they want to bring to the customer in the upcoming quarter of the year and more important what resources they need to produce this functionality. During these refinement sessions, a first stocktaking of the required experts time in the building block teams and application integration team is established. This implies that the team starts negotiating what the capacity of these teams is for the upcoming quarter of the year. By this process of negotiation, they create a first indication of how to allocate the shared experts’ time.

4.3.4.2. QBR-meeting

When the agile teams in the cluster existing customers have established the plans for the epics, these epics are brought to the so-called QBR-meeting. The QBR-meeting is a quarterly returning central event in which all the agile teams from the organization come together to discuss their new epics for the upcoming quarter of the year. The QBR-meeting is best described as a marketplace in which the different agile teams can discuss and negotiate the required resources that are needed in order to produce the epic that they are going to work on. The main goal of this meeting is that the interdependencies between the activities of the different agile teams are indicated and the resources in terms of experts time that is required for these activities are allocated. The meeting covers two full days in which all the members of each agile team has to participate. The first day of this two-day event is about further defining and sharpening the epics that the teams are going to work on in the upcoming quarter of the year. The second day of this event is all about negotiating the experts time in the building block teams and application integration team in order to establish agreement about the allocation of the shared experts' time.

4.3.4.3. Rules of the QBR-meeting

As indicated, the QBR meeting can be seen as a marketplace in which the agile teams can negotiate about their epics and the required resources that they need in order to create these epics. The term marketplace does however not imply that the teams are free in how they accomplish this process of resource allocation. In order to structure the QBR meeting and make the meeting as efficient as possible, rules are pre-defined for the meeting. One central rule that the organization has installed is the fact that the communication between the different teams should be primarily conducted by the mission leaders of the agile teams. This rule is integrated by InSurCom in the meeting to create a fluid process of negotiation about the shared expert time in the building block teams and application integration between the different teams. Important in this structuring process is the role of scrum master. The scrum masters are responsible for the application of these rules in the team that they work and should make sure
that the teams conform to the timeframe that is integrated to structure the meeting. The rules integrated into the QBR-meeting construct the basis for the negotiating process that is necessary to coordinate the shared experts' time in the building block web, building block app and application integration teams.

4.3.4.4. Role of mission leader during QBR-meeting
A central role in the negotiating process about the shared time of the expert in the building block teams and application integration team is assigned to the mission leader of the agile team. The mission leader is responsible for the product backlog of the team and therefore the mission leader has to make sure that the required time of the experts in the building block app, building block web and application integration team is assigned to his or her teams' set of activities. During the QBR meeting, this was nicely captured by a conversation between respondent C and the mission leader of the building block app team. In this conversation respondent C discussed the capacity in terms of expert time in the building block app team in order to decide whether his planned feature could be produced in the upcoming quarter of the year. The mission leader of the building block app team indicated in this conversation that his capacity was also asked by agile team D2 and other teams. Due to the fact that the activities of agile team D2 were contributing more to cluster objectives, the resources were assigned to agile team D2. Respondent C therefore had to redefine his planned feature because the capacity of the building block app team could not be assigned to his set of work activities for the upcoming quarter of the year. Ultimately by this process of negotiation, the mission leaders in the cluster existing customers were able to refine and make an allocation of the resources that they needed in order to produce the planned epics and features. Essential in this allocation process is the prioritization based on the cluster objectives. The inter-group role of mission leader in these negotiations ultimately created a common perspective about the allocation of resources of the building block app team.

4.3.4.5. Role of cluster leader during QBR-meeting
During the course of the second day, the allocation of the resources of the building block teams and application integration team became more clear. Indicated in the situation described in the previous section is the fact that allocating the shared resources and to what team or teams they are assigned is a process of prioritization. This is due to the fact that the time of the experts in these teams is limited and some form of prioritization has to be made in order to allocate the time of the experts. This prioritization issue should first of all be resolved by the mission leaders
of the agile teams. However, when the mission leaders are not able to come to an agreement about the allocation of the resources of the indicated teams, the role of cluster leader becomes pivotal. As the cluster leader is responsible for the objectives that were set for the cluster, the cluster leader ultimately has to decide which team should get the requested experts time of the building block app team. This decision of the cluster leader is driven by the prioritization based on the cluster objectives. In this process, the main coordinating function of the cluster leader is to create a common perspective based on the objectives of the cluster that have the highest priority. By assigning the time of the experts in the building block app to the team with the activities that contribute most to the cluster objectives, a common perspective between the teams is established and the allocation of resources is determined.

4.3.4.6. Epic plan board during QBR

The allocation of the shared resources between the agile teams in the comes together on the Epic plan board. At the end of the second day of the QBR meeting, a gigantic board is placed on the stage of the campus in which the QBR-meeting takes place. This life-size board is called the epic plan board. The importance of this plan board became more vivid during the observation days. This life-size board visualizes the upcoming sprint periods for the next quarter of the year on the horizontal axes of the board. Vertically, all the different agile teams were indicated, creating an oversight of all the agile teams and the upcoming quarter of the year divided in timeframes of three weeks. In these sprint periods, the different features and epics the teams were going to work on were indicated. First of all the rules for creating this board will be discussed, followed by a description of how coordination based on this representation is established.

4.3.4.7. Rules for creating the epic plan board

In order to construct the epic plan board, different rules were defined for the agile teams. First of all the agile teams had to locate their features and epics on the board in a particular timeframe. This timeframe made sure that all the agile teams were able to allocate their features and epics on the board. After the agile teams had indicated and placed their features and epics on this epic plan board they had to use a red rope to indicate for each epic which other teams were required to create this epic. This results in a situation in which the different agile teams were together constructing this central allocation object and by this process further developed agreement and a common perspective on the allocation of the experts time that they needed in the upcoming quarter of the year.
4.3.4.8. Epic plan board

The process of developing the epic plan board resulted in a life-size board that captured all the activities in terms of epics the teams were going to work on in the upcoming period and for which activities they were dependent upon other teams. Important on this board are the red ropes that were indicating for which activities they needed the experts time in the building block app, building block web and application integration. This means that the epic plan board has two coordinating functions inherent in it. First of all, because all the different agile teams are indicated on the plan board, the representation brings together the different agile teams in the cluster existing customers. More important however in the coordination of the shared experts' time, the epic plan board allocated the experts time of the building block teams and application integration team to the agile teams and the sprints in which they were required.

4.3.5. Simultaneity constraint

The simultaneity constraint relates to all the activities that either have to be executed at the same point in time or cannot happen at the same point in time. In InSurCom the simultaneity constraint is embodied by different meetings in which the agile teams have to participate, and the constraining element that disables them to work on specific components of the platforms with different teams at the same time. Important to mention is the fact that the relatedness of the teams based on the customer journey does not mean that there is a particular sequence in the activities of the teams based on this customer journey.

As discussed in the section on the task/subtask interdependency, the agile teams are related based on the seven central objectives. This results in a need for different meetings to align activities and objectives. Meetings facilitate the use of different coordination mechanism in the sense that during these meetings the alignment of work activities is established. The coordinating function in these meetings will be discussed in the next section on how coordination between the agile teams is established in InSurCom.

Inherent in the construct of meetings is the fact that the teams or at least one person delegated from the team is at the same place, at the same time as the other team(s). As a result of this, every meeting constitutes to the simultaneity constraint. This constraint and the need for meetings is further emphasized by the fact that the agile teams are obligated to discuss their new functionalities and ideas for the different platforms of the organization with different stakeholders. One of the most important stakeholders in this connotation relates to informing the other agile teams in the cluster existing customers. Different meetings are integrated into the work routines of the agile teams to keep the different adjustments and tasks that the teams
create aligned. To construct the simultaneity constraint, the different meetings that the agile teams have to attend will be discussed:

The first meeting, that all agile teams in the cluster have to attend, is the quarter break meeting (QBR). This meeting covers two full days in which the agile teams come together to discuss their new features and epics for the upcoming quarter of the year. As this meeting, or by the organizations recalled "event" covers two full days every quarter of the year, there is a two-day constraint in which the teams are not able to conduct their everyday work activities. The second meeting that is integrated into the work activities of the agile teams is the cluster meeting. The cluster meeting is a one-hour meeting that takes place every week. During this meeting, the mission leaders of the agile teams in the cluster existing customers come together to discuss the progress on their features and epics and the impediments that they face in the process of completing these features and epic. The third central meeting is called the cluster demo. The cluster demo is organized every three weeks and during this meeting, the mission leaders of the agile teams present what their team has accomplished in the past three weeks (the sprint) and what the team will produce or work on in the upcoming sprint period. The last category of meetings constructing the simultaneity constraint are the informal meetings that are not pre-defined or part of a vast meeting structure but take place whenever two or more teams decide that it is necessary to come together and discuss work activities. As all meetings require that at least one delegated person is at the same place at the same time as the other teams, these meetings create a constraining interdependency.

Besides meetings, the simultaneity constraint also arises during work activities. The different components within the platforms, as for example the declaration page or the customer information page, can be adjusted at the same point in time by different teams. When different teams want to make adjustments to the same specific component of one of the platforms, they can be constrained by the fact that this adjustment can harm adjustments of other teams. In most of the cases more impactful adjustments are made by the WEB, APP, and Application integration teams. However, as the agile teams also have their own IT-specialist, a lot of adjustments can be made by the agile teams their selves. When the different teams want to make adjustments on a specific platform and then more specific on the same specific component of this platform, the situation arises in which they can hinder each other. Therefore the teams are constraint by the fact that their work activities cannot be executed at the same time whenever other teams are already working on this specific component of the platform.
4.3.1. **Coordinating simultaneity constraint**

As this constraint is constructed based on the different meetings in which the mission leaders have to attend and the constraining element in working on the same component of one of the platforms the way in which coordination is established will be described in relation to the specified constraint.

4.3.1.1. **Coordinating the platform component constraint**

The disabling element in this constraint is the fact that when multiple people are making adjustments in the same specific component of one of the platforms this could harm the adjustments that are made by the other agile teams that are working on the same component of the platform. The following section will first describe how the agile teams handle the simultaneity constraint that relates to working on the same specific component of one of the platforms.

4.3.1.1.1. **Epic plan board creation**

In order to coordinate the simultaneity constraint that is a result of not being able to work on one specific web component of the platforms that InSurCom offers with multiple teams together, the epic plan board has a central role. As discussed in the previous section on how coordination of shared resources is established, the epic plan board allocates the resources in terms of experts time to the specific team in a particular sprint. Besides the allocation mechanisms that this plan board constructs, the epic plan board creates an oversight of the different features and epics that are created in the upcoming quarter of the year. By this indication of work activities in a particular sprint, alignment in terms of timing of work activities is established. In order to decide when which team is able to work on the particular component, the building block teams inform the mission leaders about the possibilities of working on the specific component of the platforms and by a process of negotiation, the mission leaders decide which team is able to work on the component in what sprint period. This results in the overview on the epic plan board on which the epics and features are indicated in the specific sprint period the teams are going to work on the specific component of one of the platforms. By this, the simultaneity constraint is coordinated by the fact that agreement about when what team can work on this component is established.
4.3.1.1. Planning during the Scrum-cycle

Due to the fact that the planning that was made on the epic plan board can change during the course of time, this constraint is further coordinated by the Scrum way of working. Inherent in the scrum way of working are the so-called sprints. Sprints refer to time blocks of three weeks that demarcate a particular period in terms of work activities. The scrum process starts with a poker session. During this session, the teams discuss which items (activities) are included in the upcoming sprint. When the team has decided which items are included in the upcoming sprint, commitment on these items is provided. This provision of commitment means that the teams expect to finish all these items in the upcoming sprint. This vast rhythm and the fact that the scrum routine requires the team to plan the set of activities that are executed in the upcoming three weeks coordinates the simultaneity constraint. This because the team has to make sure that the activities that are included in the sprint can be performed in the course of this particular sprint. This forces the agile teams to plan the work activities and discuss the planning of the other teams in such a way that these work activities can be executed in the next sprint and are not constraint by the fact that another team is already working on a specific component of one of the platforms.

4.3.1.2. Meeting constraint

Inherent in the construct of meetings is the fact that people have to be in the same place either physical or by means of digital communication at the same time. The activity, in terms of the meeting itself, is therefore a constraining element due to the fact that when people are not at the same place at the same time, the activity cannot be executed. In order to deal with the simultaneity constraint that is embodied by the different meetings in which the teams have to attend a planning system is incorporated in InSurCom.

4.3.1.2.1. Outlook agenda system

All the agile teams in the cluster existing customers make use of the Outlook agenda system. This is an open agenda system that is directly coupled to the email server. The outlook agenda links all the agendas of the people working in InSurCom. For the agile teams in cluster existing customers, this means that every expert in the team is able to see the agenda of all the other experts located in the other agile teams. When looking at the different meetings in which the agile mission leaders have to attend this means that the system incorporates all these meetings in the agendas of these mission leaders. Due to the integration of all the agenda's that are linked to the people working in InSurCom, this system is able to invite different people to a particular
meeting or activity. In order to plan the pre-defined vast meetings that are integrated into the work routines of the agile teams, this system is able to plan forward all these meetings for the upcoming year and integrate these meetings in the agendas of the agile teams. This means that the QBR-meeting which covers two full days in which all the agile teams have to attend is in September 2018 planned forward until the end of 2019. This is done because all the different agile teams with their own experts and therefore their own specific agendas have to be in the same place at the same time. The same idea of this vast rhythm is applied to the cluster meetings in which all the agile mission leaders have to attend on a weekly basis and the cluster demo that takes place every three weeks. The cluster meeting is planned on a vast moment in time every Thursday of the week. The cluster demo follows the rhythm of the sprints and is planned every three weeks on a vast moment on Thursday as well. As these meetings are part of the vast work cycle of the agile teams, these meetings are scheduled for an undetermined period of time in the outlook agenda system of InSurCom and no additional consultations are needed to plan these meetings.

Contrary to the vast and pre-defined moments in which the QBR meetings, cluster meetings and the cluster demo's take place are the informal meetings between the agile teams in the cluster. These meetings are not predefined but are created ad hoc, most of the times by the mission leaders of the agile teams that want to discuss things together. Due to the fact that the teams are located close to each other, they are able to make arrangements and agree on a meeting, simply by walking to each other. Altogether this means that the outlook agenda system coordinates the simultaneity constraint by synchronizing all the agendas of the members of the agile teams into one coherent system. And by this synchronization of the pre-defined moments in which the meetings take place, the system creates agreement on the time and place these meetings are conducted.

4.3.2. Producer/consumer relation

In order to understand the producer/consumer relation between the agile teams, a short recap of this interdependency will be provided. In its core, this interdependency means that one team is dependent upon a particular input that another team produces in order to execute or perform work activities. In InSurCom agile team C2 is responsible for the year-round communication to policyholders of InSurCom. One of their communication elements relates to informing customers about new functionalities that the organization offers. The agile teams in the cluster create these functionalities. The communication of these functionalities constitutes to the
producer/consumer relation based on the fact that the agile teams want the communicate new functionalities towards their policyholders.

This results in three constraints that can occur within this relation. First of all, there is a constraint based on the fact that the activity of the producer, the one that produces the input should be completed before the consumer can start its own activity.

The second constraining element in this relation is based on the fact that the input that the producer has created should be transported to the consumer. In InSurCom the product that needs to be transported is information and therefore transportation in this relation is referred to as communication. The third constraint relates to the fact that the produced and communicated information should be usable for the consumer in the sense that it is able to use this input for its own work activities.

This interdependency is best described in the situation in which a new feature in the app was developed by agile team D1, the new feature created information and insight in the compensations for policyholders. This new feature should be communicated to the customers and therefore agile team D1, first of all, delivered the content of this new feature to agile team C2. Agile team C2 was then able to communicate to customers via the newsletter and other communication channels. Agile team C2, the consumer in this relation, is however only able to start the communication process of this new feature after they received the content from agile team D1. Also, the delivered content should be usable for agile team C2. Because whenever this input is not directly usable, agile C2 is not able to start its work activities. In this sense, agile team C2 can be indicated as the consumer of the content related to the functionalities that the agile teams in the cluster, the producers, create.

4.3.1. Coordinating producer/consumer relation

The producer/consumer relation is directly indicated on the strategic canvas of agile team C2 on which is stated that the team is responsible for the communication of new functionalities that the agile teams in the cluster produce. In order to coordinate this producer/consumer relation between agile team C2 and the other agile teams in the cluster existing customers different coordination mechanisms are integrated into InSurCom.

4.3.1.1. Role of mission leader

The first coordination mechanism that coordinates the producer/consumer relation is the role of mission leader. As earlier indicated the mission leader of the agile team is responsible for seeing the interfaces with the other agile teams. In the producer/consumer relation between the agile
teams in the cluster existing customers and agile team C2, this means that whenever a particular functionality needs to be communicated to customers the mission leader takes the first step in setting up this communication activity. This implies that the mission leader contacts the mission leader of agile C2 to set up the requirements for the communication towards the customers. Due to the fact that the mission leader of agile team C2 has already gained insight in the activities of the other teams during cluster meetings, demo meeting and the QBR meeting, she is aware of what the functionalities are that the teams are working on. This facilitates the producer/consumer relation by the fact that the consumer (agile team C2) in terms of the intergroup role of mission leader has gained insight in the functionalities and therefore the content that the team ultimately has to communicate. In terms of the producer/consumer relation, this means that the consumer is already knowledgeable of functionality that the producer wants to communicate and already generated information about the required content that should be communicated.

4.3.1.2. Role of content and communication expert
As the producer/consumer relation is set up by the mission leader, the role of Content & Communication expert can be indicated as the second important role to coordinate this interdependency. The role of Content & Communication expert ensures that the input in the form of content that is delivered to agile team C2 is usable for the team. In the producer/consumer relation, this means that the Content & Communication expert of the producing team comes together with a content and communication expert of agile team C2 and delivers the content for the communication message. The usability of this input is created by the fact that all the different Content & Communication experts are integrated into so-called expert-groups. These expert-groups unify all the Content and Communication experts and bring the experts together ones every month to discuss topics related to their specific expert area. This intergroup role of Content & Communication expert creates a common perspective with respect to the specifications of the content that should be communicated to customers. By this, InSurCom creates uniformity in the way messages are communicated to customers and this coordinates the producer/consumer relation by the fact that usability of content for communication purposes, the input, in the producer/consumer relation is established.

4.3.1.3. Backlog routine
The process of communicating a particular message to the existing customers of InSurCom is captured in the backlog routine. The backlog routine starts when a particular team in the cluster
delivers the content of the message that they want to communicate. After agile team C2 has received this content the production of a backlog item is started. A product backlog item is best described as a specific action that needs to be executed by the team. In this item, first of all, the user story for the customer is described. Then a specific description of how this action will be executed and how it relates to the objectives of the team is described. After that, a deadline for the specific item is indicated and from that moment on the team is able to start the work activities. This routine coordinates the producer/consumer relation first of all by the fact that it brings the agile team who produces the content together with agile team C2 who communicates the content to the customers. This linking element in the routine makes sure that producer and consumer are in contact with each other as the routine requires input in the form of content from the agile team who wants to communicate a message to the customer. The other way in which this routine coordinates the work activities of the producer and the consumer is that it constructs task completion and stability. This is reflected in the backlog of agile team C2 which has to indicate in which stadium the activity is. This is displayed in the backlog of the team by the categories: to do, doing and done. By this indication the producer and consumer are able to follow the progress on the communication process of the created feature or epic.

4.3.1.4. Content calendar
In order to align the different communication messages that the agile teams want to send out to the customers, agile team C2 uses a content calendar. On this content calendar, all the different communication messages are indicated in the period that they needed to be communicated to the customers. This enables the consumer, agile team C2 to align the different communication messages of the agile teams, the producers, in the cluster. The content calendar, first of all, creates visibility in when the input in the form of content should be delivered to the team. Another function of this content calendar relates to the fact that agile team C2 can only communicate the particular content when the new functionality of the producer is launched on the platform in which the new functionality is integrated. Whenever agile team C2 starts communication about this functionality before the functionality is live on the platform this would cause an unwanted situation due to the fact that expectations are created that cannot be live up to. In its core, the content calendar, therefore, coordinates the producer/consumer relation by first of all acknowledging and aligning the activities related to the different communication messages of the agile teams in the cluster existing customers. Furthermore, the content calendar functions as a planning tool for the required input in the form of content that enables the team to communicate the message to the customer at the right point in time.
5. Discussion & Conclusion

5.1. Conclusion

In the first chapter of this research, the following research question was formulated: “How is inter-team coordination between agile teams established in a large organization working with multiple agile teams?” The following section will answer this research question by describing in a concise way how inter-team coordination between agile teams is established in InSurCom.

5.1.1. Coordinating the task/subtask interdependency

In InSurCom the agile teams are together responsible for the central cluster objectives that they strive to reach, by working on their team objectives that are the central point of focus in their work activities. Due to the fact that these team objectives to some extent overlap in the customer journey these subtasks are interdependent upon each other.

In order to coordinate this relation based on the same objectives, several coordination mechanisms are integrated into the work processes of the agile teams. When the agile teams were set up they were provided with a strategic canvas. This strategic canvas assigned the work activities and responsibilities in the optimization process of the customer journey to the teams in the cluster. With this visual plan, the first demarcations in terms of responsibilities in the customer journey were created. In the road towards achieving the team objectives, the role of mission leader is of great importance. The mission leader can be seen as the liaison officer who generates information about the activities of the different teams in the cluster and with this information creates a common perspective on how to reach the cluster objectives. In this information generation process, a central rule in the work of the teams is to always inform other teams when work activities are closely related. This is of great importance as the teams are constantly creating new functionalities and therefore work on a constantly changing set of work activities. This formally defined rule creates agreement and establishes coherence in the way in which work activities are executed by the teams. This informing process is facilitated by the integration of the cluster meeting and demo meetings in which the mission leaders are able to see the work activities of the other teams and create alignment between the set of work activities of their own team and the other teams. Of great importance in coordinating the work activities of the different teams are the informal meetings in which the mission leaders are able to discuss work activities in-depth. The alignment in work activities is further facilitated by the use of the TFS-system, in which all the teams have to indicate their work activities in so-called backlog items they are going to work on in a particular sprint period. By the use of this representation, a scaffolding of the activities that together construct the team objective is created. Coherence
in the work activities of the teams is further developed by the role of cluster leader who is responsible for the objectives of the cluster altogether. The role of cluster leader is to monitor the work activities of the different agile teams during the QBR-meeting, demo meetings and cluster meetings and redirect these activities towards the cluster objectives whenever needed. By this steering process, the activities of the teams are aligned and redirected towards the cluster objectives and coordination of the task/subtask interdependency is established.

5.1.2. Coordinating the shared experts’ time

In order to produce the functionalities that the agile teams in InSurCom want to bring to the customers, the teams have to share the experts time in the building block web, building block app and application integration teams. Due to the fact these teams are responsible for the creation and integration of the larger functionalities that the agile teams want to bring to the customer, the time of the experts located in these teams create a shared resource.

The allocation of the experts’ time starts with the epic development and refinements sessions in which a first stocktaking of the required time of these experts is made based on the epic that the team wants to create. After establishing this first stocktaking of the required experts' time, the functionalities that the teams want to create are brought to the QBR meeting. This marketplace is integrated into the work process of the agile teams to allocate the time of the experts to the agile teams. In order to make this marketplace an efficient way of allocating the shared experts’ time, communication between the teams is performed by the mission leaders. This rule constructs the basis for the negotiation process of allocating the shared experts’ time. The actual allocation of the shared experts’ time comes down to a process of negotiation between the mission leaders of the agile teams in the cluster who together construct a common perspective on the allocation of these resources. Whenever the mission leaders are not able to develop agreement about the allocation of the time of these experts, the cluster leader decides which team gets the resources assigned, based on the work activities and their contribution to the cluster objectives. The final allocation of the experts’ time is presented on the epic plan board. On this epic plan board, the agile teams indicate their epics and features they are going to work on in the upcoming quarter of the year and for which activities they need the experts' time in which time frame. This epic plan board establishes agreement on the final allocation of the shared experts’ time by bringing together all the activities of the different teams in an overview that presents the final allocation of the time of the experts in the building block web, app and application integration teams to the agile teams in the cluster existing customers.
5.1.3. **Coordinating the simultaneity constraint**

In InSurCom two situations together construct the simultaneity constraint by on the one hand the different meetings in which the mission leaders of the agile teams have to attend and the fact that the teams are not able to work on a specific component of one of the platforms with too many teams together.

In order to make sure that the teams are not constrained by the fact that too many teams are working on the same component of one of the platforms, the epic plan board is used as an important coordination mechanism. Besides the allocation function of this visual representation, this epic plan board also indicates which activities will be executed in which sprint period. By a process of negotiating and ultimately indicating and planning the work activities in a particular sprint on this plan board, the mission leaders together decide when their team is able to work on the specific component of one of the platforms so that they overcome the fact that too many teams are working on this same component during the same period in time. When the teams are working on their features and epics during the sprint periods this constraint is further coordinated by means of the Scrum method of working. This way of working requires the teams to plan their work activities for the upcoming sprint period and by a process of deciding which activities will be executed in that particular sprint the team makes sure that activities that are planned can be executed and are not constraint by other teams that are already working on the same component of the platform.

The meetings that require from the agile teams that at least one delegated person is in the same place at the same time as the other agile teams are coordinated by the use of the Outlook agenda system and the vast and pre-defined cycle of meetings. This outlook agenda system schedules the QBR meeting, the cluster meeting, and the cluster demo on a vast moment in time. Due to this vast rhythm in which these meetings take place no additional consultation are needed to plan these meetings. By synchronizing all the agendas of the different experts in the agile teams, agreement on the time and place of these meetings is established. Contrary to these pre-defined meetings are the informal meetings that are planned ad-hoc by the mission leaders of the agile teams that are located closely to each other.

5.1.4. **Coordinating the communication of new functionalities**

In InSurCom agile team C2 is responsible for the communication of the features that are created by the other agile teams in the cluster. In this relation, agile team C2 is the consumer of the content that is created by the other agile teams in the cluster which can be indicated as the producers in this relation. The interdependencies inherent in this relation refers to the fact that
the input in terms of content should be produced and ready before agile team C2 is able to start its own work activities. Whenever this input is not ready, communicated or usable the activities of agile team C2 cannot be executed.

In order to overcome these constraints, the mission leader of agile team C2 first of all generates information about the input in the form of content that ultimately has to be communicated. By attending to the cluster- and demo meetings, the mission leader becomes knowledgeable of the work activities of the other teams and therefore the features that they want to communicate to the customer. In order to align the inputs from the different agile teams, a content calendar is integrated into agile team C2. The content Calendar acknowledges and states when the input for the different communication messages should be delivered. In this, the content calendar operates as a scheduling tool for the delivered content and indicates when the particular content should be communicated to the customer.

In order to make sure that the content that is delivered by the producer is usable for agile team C2, experts groups are integrated into InSurCom. In these expert-groups, the content & communication experts come together to create uniformity in the way in which content is communicated to customers. This expert group creates uniformity in the process of creating content and therefore makes sure that the content that is delivered to agile team C2 is directly usable. When agile team C2 receives the content, the backlog routine in which a description of the user story for the customer, a specific set of actions and the relatedness of these actions to the team objectives is started. This routine brings together the producer and the consumer by the fact that this routine can only start when the content created by the producer is delivered to agile team C2. In the production of the communication message to the customer, this routine creates task completion and stability because this routine captures in which stadium the communication message is so that the producer and consumer are both able to see the progress on the communication message.

5.2. Objective of the research

In the first chapter, the following objective was defined for this research: the objective of this research is to get a better understanding of inter-team coordination of agile teams in InSurCom in order to further develop our understanding of agile at scale in organizations. As a result of the described conclusion of this case study research, it can be stated that the objective of this research was achieved. The findings show the relatedness of the agile teams in InSurCom based on the interdependencies that create their relatedness and furthermore this research provides a
description of how the agile teams in InSurCom deal with these interdependencies by a process of applying different coordination mechanisms.

5.3. Theoretical implications
Clearly indicated in the current literature on agile at scale is the fact that sound academic research on this rather new phenomena lacks (Dikert et al., 2016). With the application of a single-case study research in InSurCom, this research provides a deeper insight into the concept of agile working at scale. By describing how inter-team coordination between agile teams is established in InSurCom, this research contributes to filling up the gap in the current literature on large-scale agile working and more specific on the concept of inter-team coordination of agile teams.

The current literature on large-scale agile working describes that most of the challenges relating to large-scale agile working are a consequence of the interdependencies that agile teams have with other teams and departments in the organization (Dikert et al., 2016). Even though the results of this research are not generalizable to other organizations working with multiple agile teams, the description of the relatedness of agile teams in InSurCom based on the shared objectives, the shared experts’ time, the constraining element in time and the producer/consumer relation enriches our understanding on the nature of the challenges that are a result of the interdependencies that require coordination between agile teams.

Secondly, the work of Lindvall et al. (2004), described how the integration of multiple agile teams with several interdependencies between these teams results in a need for more formal communication in the form of meetings and formal documents. As described in this research, in order to coordinate the work activities of multiple agile teams, different formal meetings such as the cluster meeting and QBR meeting are integrated into the work processes of the agile teams in InSurCom. These meetings are essential moments in which alignment of work activities by means of different coordination mechanisms is established. Therefore this research suggests in line with the work of Linvall et al. (2004), that when organizations implement multiple agile teams with several interdependencies between these teams at the organizational level, this results in a need for more formal meetings.

5.4. Managerial implications
The first managerial implication that this research suggests relates to the application of the cluster and demo meetings in InSurCom. During the cluster meeting, the agile teams discuss the development of the features, epics and the progress on the cluster objectives. During the
demo meetings, the teams present their finished work activities and the set of work activities they are going to work on in the upcoming sprint period. Even though these meetings are integrated in order to coordinate the task/subtask interdependency between these teams, these meetings lack the possibility for two or more teams to discuss work activities in-depth. As a result of this, the respondents indicate that a lot of informal meetings between the agile teams are scheduled in order to discuss how their set of work activities relate to the set of work activities of a particular other team. InSurCom should therefore consider to critically reflect on the application of these meetings and create more space for the teams to discuss work activities more in-depth so that the need for additional coordination in the form of informal meetings is no longer necessary.

The second managerial implication relates to the process of prioritization in the allocation of the experts time in the building block and application integration teams. In order to coordinate the time of these experts, a process of different coordination mechanisms is integrated into InSurCom. In this coordinating process, the mission leaders should together create a common perspective on how to allocate the time of these experts to the teams. Whenever the teams are not able to do so, the cluster leader makes the final decision in this allocation process based on which set of work activities contribute most to the cluster objectives. During the interviews, the respondents indicated however that it is rather hard to prioritize their own teams’ work activities in relation to the work activities of the other teams and therefore more coordination in the form of the role of cluster leader is required. When InSurCom is able to communicate more clearly which set of work activities contribute most to the cluster objectives, this prioritization process becomes more efficient and the need for additional coordination to allocate the shared experts’ time would decline.

5.5. Limitations of the research

As in any research, this research also has important limitations. The first limitation of this research is related to the data collection methods that were incorporated in this single case study research. Only two days of observations were conducted during the QBR-meeting of the organization and only mission leaders, cluster leaders and an agile coach were interviewed. As a result of these limited data collection methods, the richness of the data of the research is very limited. This results in the fact that the research is not able to capture in what specific moments the interdependencies appear and in what context the indicated coordination mechanisms were used. Furthermore, this limited the profoundness of the description of how the coordination mechanisms actually performed their coordinating function.
Another major limitation of this research that has to be recalled is the limited time scope of this research. During the course of the research, it became clear that establishing inter-team coordination is a process of dealing with interdependencies between teams and these interdependencies can change along with the activities that the agile teams execute to improve the customer journey. This resulted in the fact that most of the respondents could not identify the specific direct relation between their own team and other teams but described in a more general way the relatedness of the teams in the cluster existing customers. Due to the limited time scope of this research, no in-depth picture of the interdependencies that create a particular relation between two or more teams could therefore be established. This further limited the description of how exactly and in what situations inter-team coordination was established.

A third important limitation of this research is the scope of this research. During the course of this research, it became clear that a lot of interdependencies are related to other agile teams outside the scope of the cluster existing customers in InSurCom. Due to the limited scope of this research, it was not possible to include the interdependencies with these teams outside the cluster in the research. This limited to a great extent the ability to describe how inter-team coordination between agile teams is established throughout the whole organization.

The last limitation of this research is the fact that this single-case study focuses on a particular organizational setting in a specific company which limits its ability to generalize the found results to other contexts. This is further emphasized by the fact that InSurCom is not a typical agile organization as described in the case selection section and the fact that the agile teams in this research are not able to fully and autonomously create all the software with the resources in their own team. It is therefore not possible to generalize these findings into other contexts that have incorporated multiple agile teams.

### 5.6. Further Research suggestions

The first suggestion for further research is to focus on the concept of inter-team coordination between agile teams in other industries than the software development industry. This is particularly important because the concept of agile working is entering many different industries and organizational settings (Paasivaara et al., 2014). In this descriptive research, it became clear that the industry and the related core business of InSurCom greatly influence how truly agile the teams are working and how they are related to other teams in the organization. As more agile teams are appearing in non-software development organizations it is important to look at the concept of inter-team coordination of agile teams in other industries than the software-development industry. This could further develop our understanding of the concept of
agile working at scale and second of all the challenges related to coordinating multiple agile teams.

The second suggestion for further research relates to researching how inter-team coordination between agile teams is established over a longer period of time. Due to the fact that the agile teams in InSurCom are constantly creating new functionalities, the set of work activities that are required to create these functionalities change over time. As a result, interdependencies that are a consequence of these work activities change as well and therefore the way in which coordination between these activities is established also changes over time. Therefore further research should focus on the dynamic character of the interdependencies and the coordination mechanisms that are integrated in organizations to create inter-team coordination.

Lastly, in order to better understand the concept of inter-team coordination throughout the whole organization the scope of researching inter-team coordination should be enlarged. In this research, only the interdependencies between agile teams in the cluster existing customers of InSurCom were investigated. However, these teams are also related to other departments and teams that are located outside this cluster, creating additional interdependencies that have to be coordinated. Further research should therefore focus on the interdependencies that agile teams have with teams and departments throughout the whole organization. By looking at the relatedness of agile teams and other departments throughout the whole organization a more comprehensive understanding of inter-team coordination can be established.

5.7. Reflection

Overall writing this master thesis was a hard process. In the first phase of the writing process, I found it very hard to choose a specific topic for my thesis that was in line with my interest in the agile way of working but was also within the scope of a master thesis. This resulted in the fact that the scope and focus during the process of writing this master thesis were not always on point. Therefore some stupid mistakes were made mainly because a clear vision on how to reach the objective of the research lacked. The absence of a clear vision during the process of writing my master thesis was best reflected in the struggle of finding the right position of the theory of Thompson (1967) in my research.

The next point of reflection relates to the interviews that were conducted in the course of this research. During the interviews, I found it very hard to keep the structure clear and not digress towards topics not directly related to my master thesis. The struggle in keeping the right focus during the course of the interviews was further emphasized by the fact that the respondents found it very hard to make the relatedness of their team specific to any other team in their
department. Therefore the respondents most of the times started talking in a more general way about the different meetings and roles that were important in the alignment of work activities between their team and the other agile teams.

The third point of reflection relates to the observations that were conducted during this research. Even though I was well prepared and had envisioned to focus on the different interdependencies between the teams that were discussed during the QBR-meeting it was really hard to focus and choose the right place and moments to gather the data during this event. Adding the fact that during this event all the agile teams of the organization came together to discuss their work activities by means of a lot of in-group languages resulted in the fact that it was hard to gather detailed information that contributed to this research.

What helped in the generation of information for this master thesis is that I am an employer of InSurCom. This first of all helped in making agreements for the interviews as I was able to directly contact the respondents to make an agreement when consent was established. Secondly, my role as employer made it far more easy to get access to documents that were used by the agile teams. More important however in the scope of this master thesis is the fact that due to my position in the organization I was better able to understand and create a picture of the work activities that the agile teams produce. This understanding mainly helped in describing the work focus and functionalities that the different agile teams in the cluster existing customers create.

Overall I learned from writing this master thesis that is essential to have a clear vision in the process of conducting a master thesis research. This would have helped to gain more detailed information during the interviews and observations that were conducted and would have made the writing process more efficient. Second of all, I have learned to be very precise in formulation any statement or question for my master thesis but also in my correspondence with my supervisor. To conclude I want to state that the writing process of this master thesis was not my easiest task ever but I have learned very much about myself and writing a thesis in general.
6. References


7. Appendixes

7.1. Appendix – Interview guide

In this interview guide first the introduction of the interview will be described. Followed by the questions in the interview based on the stated sub-questions based on the theory of Thomson (1967).

Introduction interview

The introduction of the interview is based on the work of Ritchie et al. (2003) on research ethics in order to establish informed consent.

This research is about the inter-team coordination between agile teams. The main objective of this research is to get a better understanding of the inter-team coordination of agile teams in an insurance organization in order to further develop our understanding of agile at scale in organizations.

My name is Raico van Elsen and I’m a student from the Radboud University in Nijmegen. I’m currently doing my master in Organization Design and Development and part of this master is the my thesis in which I’m doing research on new organizational ways of organizing. More specific the agile way of working in InSurCom. Besides the fact that I’m doing my research in InSurCom, I’m also working in InSurCom in the customer service department.

The interview will be recorded to analyze the data. If there are any problems with the fact that this interview will be recorded please note this. The data from this research will be used for two purposes. First of all the data is the main source for my master thesis. Second of all, the data will be used to give feedback to InSurCom. This means that anonymity is ensured and no names will be included in any report.

In this interview on inter-team coordination of agile teams the following topics will be discussed:

- Introduction
- The agile team
- Interdependencies between teams
- Coordination mechanisms in use

This interview will last about 30-60 minutes and if there is any moment in the interview process that you want to take a break or quit then simply say it and the interview will be stopped.

The last thing to note is the ability to provide feedback on the found results. If you want to see the found results of the research than I will provide you with a summary of the master thesis.
7.2. Appendix – Interview cluster leader
- Introduction

Could you shortly introduce the activities that you perform within cVGZ?

- Agile team
  o How would you describe an Agile team?
- Relation between agile teams
  o Could you tell me something about the activities that the different teams in your cluster are performing at the moment?
  o Could you tell me something about the relation regarding the work activities between the different teams in your cluster?
    ▪ Could you describe a particular situation in which this relation is manifested clearly?
      • Why does this relation in this situation manifests?
        o Which element constitute this relation?
      • Which teams are involved?
      • How?
      • What happens when this relation manifests?
      • Who does what in this situation?
    ▪ To which degree is this relation based on the fact that particular resources have to be shared?
    ▪ To which degree is this relation based on a particular output that team X has to deliver?
      • (Informatie, software etc.)
    ▪ Are there any activities in this relation that have to happen at the same point in time?
    ▪ Are there any activities that can not happen at the same point in time?
    ▪ To which degree are the different agile teams in your cluster aware of the objectives they are striving for?
      • To what degree are the teams aware of the objectives that the other teams are striving for?
      • To what degree are the teams aware of the overarching goal this department strives for?
- Coordination mechanisms
  o Could you tell me something about the alignment between the activities of the different teams in your cluster?
  o Could you describe how this alignment between the activities of the different teams is established?
    ▪ Based on what does this alignment take place?
    ▪ Who is doing what?
  o Which possibilities are in place to establish this alignment?
    ▪ Are there any documents or presentations that provide information about the work activities in the different teams in your cluster?
      • Could you describe how these documents or presentations are used and how they provide information about the work activities?
        o Why are these documents or presentations used?
    ▪ When looking at your function within this cluster, which role do you have in this alignment?
      • Could you describe how you establish this alignment?
  To what degree are there any procedures/routines used within your cluster to align the work activities?
    • Could you describe this procedure/routine?
    • For what reason are these routines used?
  To what degree do you have insight on the activities that the different teams in your cluster is performing?
    • Could you describe how you make sure that this insight is retained?
    • To what degree are you familiar with the activities that are performed in the teams within your cluster?
7.3. Appendix – Interview mission leader

- Introduction
  o Could you tell me something about the work activities that you are currently performing in this cluster?

- Agile team
  o How would you describe an agile team?

- Interdependencies between agile teams
  o Could you describe the main work activities that your team was working on in the last few weeks?
  o How would you describe the relation between your team and the other agile teams in this cluster during these activities?
    ▪ How do these relations differ from each other?
    ▪ Zooming in on the relationship mentioned with a particular team
      • Resources
      • Output
      • Simultaneity
      • objectives
  o Could you describe how the collaboration with team X went during these activities?
  o Could you describe how the collaboration with team X went during these activities?
    ▪ Who were involved in this collaboration?
    ▪ Who did what in this collaboration?
    ▪ Based on what?
      • To what degree was this collaboration based on the fact that particular resources had to be shared?
        o Which resources?
      • To what degree was this relation based on a particular output that Team X or your team had to produce?
      • Were there any activities that had to, or could not happen at the same point in time?
      • How did the differing sub-objectives that each team strives for influence this collaboration?
To what degree was your team aware of the central goal team X strives for?

Looking at the alignment of the work activities with this team during this collaboration, how were the work activities in your team aligned with the work activities of team X?

- Were there any pre-established documents, presentations, or other visual information sources used to align the work activities in this collaboration?
  - How were these information sources used?

- To what degree were there any information sources that say something about the progress of work activities used, to align the work activities?
  - How were these information sources used?

- When looking at the different functions in the teams, what role did these different functions fulfill in this collaboration?
  - How did these functions contribute to the alignment of work activities in this collaboration?

- To what degree were there any routines (standard sequent activities) in this collaboration used to structure work activities?

- To what degree was there sight on the activities that team X performed in this collaboration?

- To what degree was your team familiar with the work activities that team X performed?
### 7.4. Appendix – codetable

<table>
<thead>
<tr>
<th>ID</th>
<th>A priori themes + colours</th>
<th>Open codes</th>
<th>Reference text</th>
<th>respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR1</td>
<td>Expert’s time in building blocks</td>
<td>“In mijn....op design”</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SR4</td>
<td>Uhm waarbij....over informeren</td>
<td>“Nou dat...klantmissieteams zitten”</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SR5</td>
<td>“Kont doordat...kunnen meedenken”</td>
<td>“ik kan....is op”</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>SR6</td>
<td>“dan heb...in mensen”</td>
<td>“Maar zit....ja.. beide”</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>SR7</td>
<td>“daar hebben....bij datacare”</td>
<td>“Omdat er...moeten onderhandelen”</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>SR8</td>
<td>“andere teams...app integratie”</td>
<td>“Want uhm...integratie etc.”</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>SR9</td>
<td>“Daar hebben....binnen datacare”</td>
<td>“We hebben....als team”</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SR10</td>
<td>Resources die....schaarste vraagstuk”</td>
<td>“die partij...die partij”</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SR11</td>
<td>“ja we....welk moment”</td>
<td>“d'r zijn...de KMT’s”</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>SR12</td>
<td>“aan datacare...wij doen”</td>
<td>“Nou omdat...informatie analisten”</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>SR13</td>
<td>“Maar zit...ja..beide”</td>
<td></td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>SC5</td>
<td>Same point in time</td>
<td>“dat hebben...ons klanten?”</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>SC6</td>
<td>“dat zie...reclamebureau briefen”</td>
<td>“wat hier...te krijgen”</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td>Different point in time</td>
<td>“Als jij....resources delen”</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SC2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC1</td>
<td>Prerequisite constraint</td>
<td>“met de...een relatie”</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>PC2</td>
<td>“behalve dat...team zitten”</td>
<td>“waar we....zij nieuwsbrieven”</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>PC3</td>
<td>“Dat is....dan verder”</td>
<td>“Waar zit....daarin dan”</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>PC4</td>
<td>“dus V8....van gezondheidsmanagement”</td>
<td>“tussen de....er wel”</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>PC5</td>
<td>“'Nou we...dus uh”</td>
<td>“En soms....of heeft”</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>PC6</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PC9</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SC1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PC10</td>
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<td></td>
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<tr>
<td><strong>Par 1</strong></td>
<td>Planning communication</td>
<td>“Dus als...de klantverwachting”</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>Par 3</strong></td>
<td>Epic planbord</td>
<td>“een heel...dan epics”</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td><strong>Par 4</strong></td>
<td>“in de...bezig is”</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Par 5</strong></td>
<td>“op het...ja ja”</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Par 6</strong></td>
<td>“in dat...worden maar”</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Par 7</strong></td>
<td>Rules during QBR meeting</td>
<td>“Hierbij wordt...kunnen worden”</td>
<td>Observ.</td>
<td></td>
</tr>
<tr>
<td><strong>Par 11</strong></td>
<td>“Op het...worden opgeleverd”</td>
<td>Observ.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **TST1** | Goal of department | “we hebben... Eigen rol” | A |
| **TST4** | “wij kunnen....te informeren” | A |
| **TST9** | “we kijken....anze KPI’s” | B |
| **TST13** | “We proberen...call reductie” | C |
| **TST34** | “call reductive...deel daarvan” | F |
| **TST35** | “waar in het....bijvoorbeeld weer” | G |
| **TST41** | “de doelen....relevant maken” | H |
| **TST19** | “soms wordt...cluster doelstelling” | C |
| **TST29** | “die hebben...die klantreis” | F |

| **TST2** | Shared work focus | “vanuit C2....jaarrond communicatie” | A |
| **TST5** | “dus we....zo voorts” | B |
| **TST6** | “Nou eigenlijk...beginnen wij” | B |
| **TST10** | “Nou dat...1000 ideeënn” | B |
| **TST11** | “een ander....uhm betalen” | C |
| **TST12** | “dan hebben...financiele kant” | C |
| **TST14** | “dat raakt....over zorg” | C |
| **TST15** | “En dat...de ander” | C |
| **TST18** | “Dus als...team minima” | C |
| **TST22** | “wel eens...bij D2” | D |
| **TST23** | “kijk...weg langs” | D |
| **TST30** | “Als jij...bij F” | F |
| **TST31** | “je hebt...beide betalingsregelingen” | F |
| **TST36** | “drie producten....nadrukkelijk samengewerkt” | H |
| **TST37** | “het tweede...drie teams” | H |
| **TST32** | “machtingen wij...die klantreis” | F |

<p>| <strong>TST7</strong> | Team objectives | “er zijn...teams ook” | B |
| <strong>TST24</strong> | “Zij zijn....dichter bij” | D |
| <strong>TST34</strong> | “Alleen dat...zijn allemaal” | G |
| <strong>TST25</strong> | “Ja en...weg lopen” | D |
| <strong>TST38</strong> | “Als we...laat stadium” | H |
| <strong>TST39</strong> | “nou even...doelstelling niet” | H |
| <strong>TST40</strong> | “er zit...packet op” | H |
| <strong>TST26</strong> | “We hebben...ja ja...” | E |
| <strong>TST27</strong> | “maar ergens...de toekomst” | E |
| <strong>TST3</strong> | “En dan...QBR komen” | A |
| <strong>TST21</strong> | “C2 hebben...heel praktisch” | C |
| <strong>TST28</strong> | “er zijn....jou product” | E |</p>
<table>
<thead>
<tr>
<th>PaR12</th>
<th>“Vervolgens worden...beide teams”</th>
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<tbody>
<tr>
<td>PaR8</td>
<td>“En daarmee...de backlog”</td>
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<td>PaR9</td>
<td>“Die afstemming....mee gewoon”</td>
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<td>“Meestal loopt....teams weer”</td>
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<td>Strategic canvas</td>
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<td>“we hebben....daarvoor doen”</td>
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<td>“Uhm..nou....voor geschreven”</td>
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<td>“Wij kregen...en dat”</td>
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<td>“hebben we...naar gekeken”</td>
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<td>“daar zit....van zijn”</td>
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<td>“In de...jou missie”</td>
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<td>Role as missionleader</td>
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<td>“de rol...te zetten”</td>
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<td>“Grootste deel....helemaal dekkend”</td>
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<td>“we hebben...ziet komen”</td>
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<td>“Dus bijvoorbeeld...er een”</td>
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<td>“Nee nee.... Dit kwartaal!”</td>
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<td>“In de....je gesproken”</td>
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<td>“Maar die...die QBR”</td>
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<td>“Ja en....nee zeggen”</td>
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<td>“demo’s kunnen....klantmissieniveau specifiek”</td>
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<td>“bij sprintdemo’s...goed zien”</td>
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<td>“We hebben....denk ik”</td>
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<td>„cluster overleg...ook ontwikkelingen“</td>
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<td>„een clusteroverleg...epics allemaal“</td>
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<td>„een clusteroverleg...elke week“</td>
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<td>„we hebben...je weekstart“</td>
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<td>Informal meeting</td>
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<td>„het is...te lopen“</td>
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<td>„Ja... en...ja, ja.“</td>
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<td>„Ja hoor...het even“</td>
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<td>„Ja dan...nodig uhm“</td>
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<td>„verder is...cluster heen“</td>
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<td>„En afstemming...zeg maar“</td>
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<td>„Ja ja...natuurlijk wel“</td>
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<td>Expert’s meeting</td>
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### 7.5 Operationalization

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<td>Budget, space, System information, Actor's time, equipment</td>
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<td>Activities</td>
<td>Producer / consumer relationship</td>
<td>prerequisite constrain, transferability, usability</td>
<td></td>
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<tr>
<td></td>
<td>Task / subtask dependencies</td>
<td>dependence on goal of department, dependence on goal of other teams</td>
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<tr>
<td>Coordination mechanism</td>
<td>Static element</td>
<td>Plans and rules</td>
<td>defining responsibilities for tasks, allocate resources, developing agreement</td>
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<tr>
<td></td>
<td></td>
<td>Objects and representations</td>
<td>direct information sharing, scaffolding, acknowledging and aligning work, creating common perspective</td>
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<tr>
<td></td>
<td>Dynamic element</td>
<td>Roles</td>
<td>monitoring and updating, substitution, creating common perspective</td>
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<tr>
<td></td>
<td></td>
<td>Routines</td>
<td>task completion / task stability, hand-off work, bringing groups together, creating common perspective</td>
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<tr>
<td></td>
<td></td>
<td>Proximity</td>
<td>familiarity -- (through working together)</td>
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</tbody>
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