Abstract: This paper aims on investigating the relationship between trust, contracts and control in an intra-organizational relationship at the Radboud University. From a rational perspective, that is provided by the current literature, control, contracts and trust in the intrafirm relationship are examined. Specifically, this research consists of a case study, which focuses on the relationship between the Faculty of Social Sciences and the ICT provider (ICT Service Centre) of the Radboud University Nijmegen. In the results of this study, the exact situation, regarding this specific relationship, is diagnosed, and possible improvements for this relationship are provided.

Keywords: Trust, Contract, Control, Intra-organizational, Radboud University Nijmegen.

Number of words: 13,507
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1. Introduction

Both inter-organizational relationships and intra-organizational relationships have increased in number and importance in the past years (Culpan, 2009). As a result, many researchers and managers increasingly have shown interest in these organizational arrangements (Culpan, 2009). They found out that these forms of cooperation or relationships can be initiated for a variety of reasons, for example to attain and sustain strategic competitiveness for the organization. Despite the willingness of many organizations to cooperate, not all relationships end up with the achievement of their prior determined goals. While most organizations and departments have good intentions, a lot of these relationships do not perform as well as expected or even underperform (Das and Teng, 2000).

A factor of decisive importance for the (in)effectiveness of the intrafirm relationships and inter-firm relationships can be the relation between control and trust. Despite the fact that lots of research has examined the control-contract-trust nexus, much uncertainty exists about control and trust in and between organizations (Inkpen and Currall, 2004; Das & Teng, 1998). In the current literature, this uncertainty is mainly expressed by the various perspectives that exist. For example, the rational perspective of Vosselman & Van der Meer-Kooistra(2009). Another recent example is the relational perspective of Minnaar, Vosselman, van Veen-Dirks & Zahir-ul-Hassan (2017).

Although there has been done a lot of research in inter-firm relationships with regard to this nexus and with the help of these perspectives, for example the study of Van der Meer-Kooistra & Vosselman (2000), Van de Bunt et al. (2005) states that intra-organizational relationships should be investigated in more detail. Dekker (2004) also mentions that there is no sufficient body of knowledge regarding trust and control for intrafirm relationships. Moreover, Costa & Bijlsma-Frankema (2007) state that more empirical research in the control-trust nexus is needed.

To contribute to the bridging of this knowledge gap, this study will examine the control-contract-trust nexus at the Radboud University Nijmegen (RU). Although the RU currently has several intra-organizational relationships, this study will focus on one specific intra-organizational relationship to examine the relationship between trust, contracts and control. This is the relation between the faculties of the RU and the ICT provider of the RU, the ICT Service Centre. For the RU, a greater understanding of the control-contract-trust nexus is very important, because all their intra-organizational relationships rely on these concepts to function properly and it indirectly influences the overall goal of the RU: providing the best quality of education and research as possible. Despite this importance, not much is known about this control-contract-trust nexus for the relationship between the faculties of the RU and their ICT provider. Due to the lack of understanding, the importance for the RU and the fact that the current literature does not have an adequate amount of research on control and trust within non-profit organizations (Dekker, 2004), this relationship seems relevant to study. To achieve an overall diagnose of this situation, this is done from a rational perspective.
To investigate and figure out the relationship between trust, contracts and control for this specific intrafirm relationship within the Radboud University Nijmegen, the following research question will be answered in this paper:

*How can the relationship between control, contracts and trust for the support services and the faculties of the Radboud University Nijmegen be diagnosed and improved?*

In order to provide a comprehensive answer to this question, trust, control and the relationship between these concepts should and will be defined. The description and elaboration of these concepts and their relationship will form the basis of the understanding of the relationship between trust, contracts and control. The following questions emerge from this relevance:

- What is meant by trust and control?
- How can the relationship between control, contracts and trust be diagnosed?
- How can this relationship be improved?

To examine the relationship in depth, a single case study is used (Bleijenbergh, 2013). Based on this case study, the answer to the central question will be formulated. Moreover, this study will be a design-focused study, because it will follow the reflective cycle of Van Aken (2004). This study will be performed at the Radboud University Nijmegen and will focus on a specific relationship between a faculty of the Radboud University Nijmegen and their ICT provider.

The perspectives that are used to diagnose this relationship are based on inter-firm relationships and are mostly used for studies regarding inter-firm relationships. These inter-firm relationships are relations between different organizations. However, intrafirm relationships are relations between different departments within an organization. Although inter-firm relationships unfold in the market and intrafirm relationships are relations within an organization, it can be said that the relationships are basically the same. Both of them are horizontal relationships. So, the perspectives on the control-contract-trust can be considered useful for both relationships.

By answering the main question, this study will contribute in several ways to both the existing body of knowledge and the practice of trust and control within intrafirm relationships. Scientifically, this study is relevant because it will generate knowledge which will enlarge the existing body of knowledge on the control-contract-trust nexus in intrafirm relationships. In addition, this study may lead to new insights on the relationship between control, contracts and trust within a intrafirm relationship. So, it might become a starting point for new research.

Practically, this study will be relevant for the Radboud University Nijmegen. The results of this research can create more understanding for the Radboud University Nijmegen regarding the satisfaction of the employees within this specific relationship. In addition, the university can benefit from the examination of the control-contract-trust nexus by considering the implementation of the recommendations of improvement for the control system. It can possibly ensure the optimization of the control system for the relationships between the various faculties and the ICT provider. So, the results from the study may be converted into recommendations for the Radboud University Nijmegen concerning the way to improve trust
and satisfaction for the employees or the way to improve control mechanisms within the organization. This understanding could also lead to an increase of the quality of products and services that are delivered by the ICT and thereby could have a positive influence on the education provided by the faculties. Consequently, the competitive position, relative to other Dutch and international universities, can improve. Finally, the outcomes of this research can perhaps result in internal research on trust and control.

The structure of this paper is as follows. In this chapter, the central topic has been introduced, the aim and contribution of the study have been explained and the main research question has been stated. In the next chapter relevant literature for the control-contract-trust nexus will be reviewed. Firstly, control and trust will be defined. Secondly, the different perspectives on the relationships between these concepts will be explained in detail. The third chapter will entail the explanation of how this research is conducted. It will present the methodology, will justify the use of the reflective cycle and will elaborate the specific case that is studied. Moreover, it will discuss and justify the various methods of data collection. Chapter four will discuss the results of the case study. Based on these results, a conclusion is drawn and this conclusion will be presented in chapter five. This chapter will also present a discussion and will discuss the limitations of this study. Ultimately, chapter five will provide some possibilities for future research.
2. Literature review

In this chapter, the relevant literature will be reviewed. First of all, the central concepts of control and trust will be explained. In 2.1 the concept of control will be defined and discussed and the following section(2.2) will define trust. After these concepts are defined, the different theoretical perspectives on the relationship between trust and control will be discussed.

2.1 Control

In the current management literature, different definitions of control exist. These definitions have one thing in common, they are all based on the definition of Anthony(1965). He states that control systems are mechanisms to ensure that organizational goals are achieved (Anthony, 1965). But, in order to define control more comprehensively, and to avoid confusion about its definition, this study defines this concept as follows:

"A regulatory process by which the elements of a system are made more predictable through the establishment of standards in the pursuit of some desired objective or state" (Leifer & Mills , 1996, p.117).

The choice for this definition derives from the fact that it is used in one of the most cited articles in the existing literature for this specific area of research(Das & Teng, 1998). In addition, it is also used in other relevant studies(Bijlsma-Frankema & Costa, 2005; Rus & Iglič, 2005; Khodyakov, 2007).

This definition explains, first of all, that control is aimed at achieving the objectives of the organization or the intrafirm relationship. It is all about the effectiveness of the achievement of these goals. It is also a quest for certainty and predictability of the behaviour of employees. In addition, the drafting of formal rules/standards for control is essential. Formal control mechanisms derive from management and are written rules that should provide support on and influence employee behaviour towards organizational goals (Jaworski, 1988).

This control of employees is necessary, because employees of organizations can be unable or unwilling to pursue the interests of the organization(s) and might rather pursue their self-interest (Merchant, 1981; Corbey, 2010). In order to guide the behaviour of employees into the desirable direction, controls can be implemented. Control is essential for the management and performance of intrafirm relationships(Dekker,2004). Furthermore, it can be very helpful for the facilitation of coordination and learning(Das & Teng, 2001). Control can be achieved by the incorporation of governance structures, managerial arrangements, contractual specifications and other forms of control(Das & Teng, 2001).

Although there are many forms of control, one specific distinction between two forms of control is very important. This is the proposed conceptualization of formalization by Adler and Borys(1996). Within their study they have identified two types of control, coercive and enabling control. Coercive controls can be characterized as highly standardized rules which are used to strictly guide behaviour. These controls are designed to create a fool proof system. When people do not adhere to these standardized rules or make mistakes, they will be
punished. The opposite of this form of control is enabling control. This form of control is aimed at calling for a person's sense of responsibility and its capabilities. It is not designed to create a fool proof system, but to give people options. These uses of management controls systems have arisen from the various forms of authority in bureaucracies (Adler & Borys, 1996). Ahrens & Chapman (2004) have used these types of control in a field study regarding management control systems.

2.2 Trust

In order to properly investigate the relationship between trust and control between the ISC and the Radboud University, the concept of trust, after defining the concept of control, should also be defined. According to Dietz and Den Hartog (2006), there are three possible areas to measure trust in practice: trust within an organization, trust between organizations, and trust between organizations and customers. This study focuses on trust and control between organizations.

Many researchers state that trust is essential for intrafirm and inter-firm relationships (Das & Teng, 2001; Ring & Van De Ven, 1992; Sydow, 1998). First of all, the presence of trust can have many advantages. For both parties, trust can help to reduce transaction costs, to induce desirable behaviour, to reduce concerns about opportunistic behaviour and can also help to reduce the extent of formal contracts (Das & Teng, 1998; Das & Teng, 2001). Furthermore, (Buitendijk, Hoekstra & Timmerman, 2009) state that, to be formed and to function, any form of cooperation needs a certain level of inter-firm trust. Firms always have to rely on the performance of their partners and remain vulnerable to the actions of their partners, which indicates that a minimum level of trust is required (Das & Teng, 1998; Kumar, 1996).

Although trust is very important for intrafirm and inter-firm relationships, various definitions of trust exist in the literature (Bijlsma-Frankema & Costa, 2005; Inkpen & Currall, 2004; Das & Teng, 2001). There is no agreement among researchers about the exact definition of trust. Despite the disagreements, most researchers seem to agree about the importance of two specific conditions for the conceptualization of trust. The first condition is the willingness to be vulnerable to risks, for example opportunistic behaviour, between parties in relationships (Vosselman & van der Meer-Kooistra, 2009). Secondly, the positive expectations about the other party’s ability, benevolence and integrity (Vosselman & van der Meer-Kooistra, 2009). This second condition is input for the willingness to be vulnerable (condition one).

To meet these conditions, this study will define trust in the way Rousseau et al. (1998, p.395) defined the concept:

“Trust is a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or the behaviour of another”.

Although there exist various conceptualizations of trust, Vosselman and van der Meer-Kooistra (2009) indicate that many other researchers recognize this concept of trust, but use a different formulation. This specific definition indicates that trust in another party leads to
vulnerability. Due to a belief that the other party will not benefit from that vulnerability, this vulnerability is accepted. So, in order to develop relationships, despite the fundamental uncertainty, it is important that all parties within a relationship have the courage to take risks (Vosselman & van der Meer-Kooistra, 2009). This can only be done if there are positive expectations of another's behaviour.

### 2.2.1 Types of trust

Over the years, several types of trust have been distinguished and have been added to the existing body of knowledge. First of all, Zucker (1986) introduced three different types of trust. These types are character-based trust, process-based trust and institutional-based trust. Where process-based trust is based on experiences of reciprocity and is related to the past, character-based trust is tied to individuals and is based on the similarities of moral and social characteristics between people. Trust tied to formal societal structures and based on institutional, impersonal arrangements is considered institutional-based (Zucker, 1986).

Secondly, three types of trust have been distinguished by Sako (1992): contractual trust, competence trust and goodwill trust. Contractual trust entails trust which is based on written or oral agreements that have been established in a relationship. This trust is based on trust that the other party will keep their promise. Competence trust is the trust in the capabilities of the other party and that this party will use these capabilities to perform the action that is agreed upon (Sako, 1992). Goodwill trust is based on an open-ended commitment to act and take initiatives in favour of the relationship. Actions will be taken for mutual benefit and will not be initiated to take advantage of the other party.

Furthermore, Bijlsma-Frankema & Costa (2005) have distinguished two types of trust: interpersonal trust and institutional (system) trust. First of all, interpersonal trust is the confidence that a person or group of people has in relying on another person or group. Secondly, the trust in the functioning of organizational, social and institutional systems is called institutional (system) trust.

Finally, Vosselman and Van der Meer-Kooistra (2009) have made a distinction between thin trust and thick trust. Thin trust is based on the influence of institutions, for example contracts, on people and organizations (Vosselman & van der Meer-Kooistra, 2009). This type can be considered similar as the institution-based trust of Zucker (1986). This form of trust describes trust as the expectation that the partner does not act opportunistic. The focus is on the prevention of opportunism. Thick trust, on the other hand, is about creating positive expectations of the behaviour of the other party. It is based on acting in the interests of the other party (Vosselman & Van der Meer-Kooistra, 2009). Thick trust can only develop if thin trust is already built, because thin trust reduces the negative expectations of control, it prevents opportunism, after which positive expectations of the behaviour of the other party can be created.
2.3 Relationship between control and trust

The concepts of trust and control have been defined separately in the previous chapters. To complete this literature review, this chapter will discuss two different theoretical perspectives on the relationship between these concepts.

2.3.1 Rational perspective

The rational perspective on control and trust suggests that both concepts have a common goal: to cope with uncertainty and behavioural risk (Vosselman & Van der Meer-Kooistra, 2009). From this perspective, the use of control or trust (or a combination) to counter this uncertainty is considered a rational choice. The implementation derives from deliberate negotiations and decisions. Where forms of control are instruments to individuals that make (strategic) decisions and serve as tools to control the relationship from a distance (Minnaar et al., 2017), trust is considered a consequence of the decision-making by these individuals.

From the rational perspective, trust can be seen as a form of social control that replaces the need for formal control (Dekker, 2004). Its presence is considered very important when situations of great uncertainty and risk occur, because formal control mechanisms will never be able to completely absorb the risks and uncertainties of complex inter-firm relationships. This is due to the fact that unexpected events and situations cannot be taken into account beforehand.

When trust is used to regulate the relationship, it is the result of individual decision-making by actors within an organization and it can be shown by relational signalling (Vosselman & Van der Meer-Kooistra, 2009). Relational signals are signals given by one party to the other, through their behaviour, that show the ability and the intention to behave cooperatively (Vosselman & Van der Meer-Kooistra, 2009). These signals thus show the commitment to the relationship and the desire to work together. By receiving and understanding these positive signals, trust is developed and strengthened. Because it is impossible to completely remove uncertainty and opportunistic behaviour, Vosselman and Van der Meer-Kooistra (2009) argue that parties should always focus on receiving these signals from the other party. From a rational perspective, these signals are essential for the creation of trust.

In addition, control also influences the process of relational signalling. Control mechanisms do not only limit the behaviour of people, but can also stimulate cooperative behaviour. Consequently, an increase of cooperative behaviour can occur and positive expectations about future behaviour may arise (Vosselman & Van der Meer-Kooistra, 2009). These relational signals can also ensure the optimization of control. So, the signals can optimize the base of the relationship (Vosselman & Van der Meer-Kooistra, 2009).

This rational approach consists of three different sub-views on the relation between control and trust; the substitutive, the complementary and the interactive perspective. The explanation of these sub-views is presented here:
- **Substitutive:**
  This perspective states that control and trust can be seen as substitutes in intra- and inter-firm relationships. The relationship between these two concepts is described as inversely related, which implies that more control results in less trust and vice versa (Vosselman & van der Meer-Kooistra, 2009). Control is mostly deployed when little trust is present within organizations and relationships. Control can, however, have a negative impact on trust. The strictly imposed rules and objectives can negatively impact the confidence of employees (Vosselman & van der Meer-Kooistra, 2009). The creation of results-oriented organizations and relations can also ensure that employees are less aware of (the consequences of) their behaviour. This perspective implies a search for an optimal balance between the amount of control and the amount of trust. It is impossible, however, to include all possible problems and situations within formal contracts. Therefore, trust will always influence inter- and intrafirm relationships. This is also the case for control; it is not possible to rely only on trust. So, control should also be included in every inter- and intrafirm relationship.

- **Complementary:**
  The complementary perspective suggests that control and trust mutually reinforce each other (Vosselman & van der Meer-Kooistra, 2009). This means that trust will lead to more control and more control will also lead to more trust. The implementation of strict rules and objectives will provide common goals for employees. So, goal congruence is an important condition. This will reduce the overall amount of uncertainty and risk in inter-firm relationships. For this perspective, control can add to trust, because trust may be the result of previous controls being fulfilled (Van der Meer-Kooistra & Vosselman, 2000; Vosselman & Van der Meer-Kooistra, 2009). This fulfilment can produce positive expectations about future contributions to the relationship (Vosselman & Van der Meer-Kooistra, 2009).

- **Interactive:**
  In the existing literature it appears that many researchers argue that the relationship is much more complex than claimed by the abovementioned perspectives (Vosselman & Van der Meer-Kooistra, 2009). According to Vosselman and Van der Meer-Kooistra (2009), trust and control interact with each other. Within this perspective, controls are seen as (non-human) actors, rather than instruments. Furthermore, trust is formed within the network and is not something that is objectively formed to ensure a good relationship (Vosselman & Van der Meer-Kooistra, 2009). Moreover, trust and control need each other, but produce each other as well. This perspective suggests that the relationship between these concepts depends on the situation. Both the substitutive and the complementary perspective come back in the relationship between these two concepts. In this interactive perspective, however, they are not seen as static but as dynamic (Vosselman & van der Meer-Kooistra, 2009). So, the relationship between trust and control can change over time. Dekker (2004) even suggests that a shift can take place from complementary to substitutive at some point.
2.3.2 Relational perspective

A perspective on the control-contract-trust nexus that recently has emerged in the literature is the relational perspective. From this perspective, contracts, control forms and trust are interactively formed by the associations between actors (human and non-human) within a network (Minnaar et al., 2017). In addition, they are not the result of individual decision-making. This perspective suggests that contracts, control forms and trust are more than instruments for the creation of stability and order. They are seen as actors who can produce dynamics and change: they can be performative. Contracts, control forms and trust circulate in a network of associations and can be performative by helping to create, maintain and modify the relationship in unexpected ways (Minnaar et al., 2017). They relate to each other through their positions in the network of associations. From this point of view, trust is thus formed within a network of associations.

According to Drost et al. (2016), there are six essential aspects (fundamental characteristics) of the relative perspective, which should be kept in mind when using this perspective on the control-contract-trust nexus. Essential for the relational perspective are the connections (associations) between entities. These associations form networks that are created and developed by the complex interactions of actors within networks (Drost et al., 2016). So, at the centre of a study, which takes a relational perspective, are the connections between entities or people within a particular network. Secondly, a fundamental characteristic of the relational perspective is the unpredictability of the effects of the interaction on the identity of actors, the actions of actors and the places where actors meet (Drost et al., 2016). This means that the identities of actors are not a fixed starting point, but can be considered an outcome of interactions. As an outcome of these interactions, human actors might become an economic man, a steward, or a hybrid form. Thus, human actors do not belong to one of the three categories from the beginning, but will become one of those due to the complex interactions. In addition, the places where actors meet are also consequences of these interactions. Places where actors meet can vary from markets or hierarchies to communal spaces. The third fundamental characteristic of the relational perspective is that it considers accounting and control to be symmetrical to human actors. It suggests that non-human actors have the capacity to act and that these actors can influence the behaviour of human actors. So, according to the relational perspective, non-human actors perform within networks: they interact with human actors. Furthermore, the relational perspective focuses on the performativity of accounting and control. This performativity is a result from the capacity of accounting and control to mediate in a network of associations (Drost et al., 2016). Due to this mediation, unpredictable effects can be generated. As performativistic mechanisms, accounting and control thus interactively constitute entities (Drost et al., 2016). Moreover, research from a relational perspective is reflexive (Drost et al., 2016). The reflexive aspect of this perspective means that no analytical design frameworks are used to study specific situations. From a relational perspective, the researchers, theories and frameworks are all part of the network of associations. Finally, the results from studies which take a relational perspective are of conceptual relevance to practitioners, because the results offer the practitioners an opportunity to reflect on decision situations (Drost et al., 2016).
2.3.3 *Rational perspective vs. relational perspective*

Important to note is that the rational perspective and the relational perspective on inter-firm relationships differ in their conceptualisations of the control-contract-trust nexus (Drost et al., 2016). To provide a clear overview of the differences between these perspectives, table 1 displays the characteristics of the rational and the relational perspective.

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>Rational perspective</th>
<th>Relational perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prioritizes:</strong></td>
<td>Entities</td>
<td>Associations among entities</td>
</tr>
<tr>
<td><strong>Contracts &amp; control structures are:</strong></td>
<td>Rational tools/instruments</td>
<td>Actors(performative mechanisms)</td>
</tr>
<tr>
<td><strong>Contracts &amp; control structures are set up by:</strong></td>
<td>Managerial decision-making</td>
<td>Circulation in network of associations</td>
</tr>
<tr>
<td><strong>Contracts &amp; control structures provide:</strong></td>
<td>Order and stability</td>
<td>Expected and unexpected consequences(dynamics and change)</td>
</tr>
<tr>
<td><strong>Trust is:</strong></td>
<td>A predictable and straightforward consequence of managerial decisions</td>
<td>A consequence of the interactions in a network that constitute the inter-firm relationship (a quasi-object)</td>
</tr>
</tbody>
</table>

In this study, a rational perspective will be taken to diagnose the control-contract-trust nexus at the Radboud University Nijmegen. However, to get a broader understanding of the relationship, this study will also mention some relational elements of rational aspects of this relationship. This choice will be elaborated upon in the following chapter.
3. Methodology

This chapter will explain the research methodology of this study. The chapter will elaborate upon the way empirical material has been collected and examined and will also provide a description of the case that will be studied.

3.1 Research strategy

The method that fits with the objective of the research is the qualitative method. Within a small complex relationship, one can look for the influence of and relationship between trust and control. So, this research is a qualitative field study. The aim of this study is to contribute to the theory and practice, by drawing conclusions, about the control-contract-trust-nexus of the relationship between the ISC and the RU, based on a combination of data and theory and that also retains context-specific information (Zahir-ul-Hassan, Minnaar & Vosselman, 2016). In addition, the research is delineated into a specific relationship, which will be further explained in 3.3.

In order to diagnose this relationship properly, this study will use the reflective cycle presented by Van Aken(2004). This reflective cycle implies that first a case is chosen and after this choice, a diagnose of the situation should be made. After this diagnose has been made, potential solutions or possible implementations can be proposed and implemented. Afterwards, the results of the implementations can be evaluated(diagnosed) and there can be checked if additional implementations are necessary. The usage of the reflective cycle is chosen, because it provides design knowledge and, in order to understand and improve the relationship between the ISC and the RU, this type of knowledge is essential. By diagnosing and possibly improving the relationship, the performance of the ISC can rise and it will help the Radboud University to fulfil its societal role of providing good education and conducting scientific research.

This reflective cycle is closely related to the rational perspective. The reflective cycle can be seen as a rational instrument, which is focused on causality, to possibly improve a situation. It is a means of achieving a predetermined, rational goal. However, according to Drost et al.(2016), no analytical design frameworks are used to study specific situations from a relational perspective. This is because the researchers, theories and frameworks are all part of the network of associations. Because the reflective cycle can be considered rational, this study will take a rational perspective to diagnose the relation between control and trust within the relationship between the RU and the ISC. However, to avoid a possible tunnel vision, possible relational elements of rational aspects of this relationship will also be taken into account.

3.2 Method

In order to properly study the control-contract-trust nexus, the method of this research includes different ways of data collection. To provide a comprehensive answer on the central question of this study, both document analysis and interviews with employees have been
done. The document analysis is included to find forms of control within the relationship between the ISC and the Radboud University and to find contracts between the two parties. The documents that are presented and analysed in this study, are considered forms of formal control, because the rules and responsibilities described in formal documents mostly are the formal controls. Interviewing employees has been done to create a better understanding of the role of trust within the relationship between the two parties. This role of trust cannot simply be found by acquiring documents or asking one question, the researcher has to understand the complete, complex situation. Furthermore, these interviews may help finding the possible occurrence of problems related to the formal contracts and documents that exist in the relationship. Due to the crucial role of the interviews regarding the creation of an understanding of the control-contract-trust-nexus, the interviews are a major source of data in this study.

3.2.1 Data collection

To create a comprehensive understanding of the control-contract-trust nexus of the relationship, first of all, both employees of the ICT Service Centre and employees of the Radboud University have been interviewed. In total, 10 interviews have been conducted with 11 employees (see Table 2). The interviews that have been taken with employees of both parties were semi-structured. This means that most of the questions asked during the interviews have arisen from various pre-arranged, general discussion topics. But, due to this set-up, the researcher also had the possibility to ask specific questions that came up during the interviews. These questions that are not pre-arranged and, more important, the answers to these questions, might be crucial for the understanding of the researcher (Boeije, 2012). The semi-structured interview questions are presented in appendix 7.1 and are based on the questions in appendix 7.5, which provides an overview with relevant topics and questions that should be answered to be able to diagnose the situation comprehensively.

All the employees of the ISC and the Radboud University who were interviewed had important positions regarding the relationship between the two parties (see Table 2). So, all persons that have been interviewed are regularly in contact with the other party and have a lot of knowledge about the dynamics of control and trust for this relationship. As a consequence, the answers received in the interviews are considered to be an accurate representation of the relationship. All the interviews with these employees have been transcribed and can be found in appendix 7.2.

After the transcription of the interviews was done, a coding process started. This coding has been done to enable recognition of important issues in the interviews before the interpretation process (Fereday & Muir-Cochrane, 2006; Zahir-ul-Hassan, Minnaar & Vosselman, 2016). The list of codes can be found in appendix 7.6 and consists of some inductive codes, emerged from the interviews, and some codes derived from the theoretical framework (Fereday & Muir-Cochrane, 2006; Zahir-ul-Hassan, Minnaar & Vosselman, 2016).
Furthermore, the appendix 7.4 presents the notes of an orientation talk with a representative of the ICT Service Centre (see Table 2). This talk was not recorded and was primarily set up to explain the plan for this study, to ask for a description of the relationship and to gain access to the documents and the employees of the ISC. All relevant information that is retrieved from this talk can be seen in the appendix and has also been used to answer the central question of this study.

Table 2
Overview of the interviews.

<table>
<thead>
<tr>
<th>#</th>
<th>Date (dd-mm-yy)</th>
<th>Organisation</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>10-04-2017</td>
<td>ISC</td>
<td>Director/Spokesperson</td>
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<td>1</td>
<td>22-05-2017</td>
<td>ISC</td>
<td>Account Manager</td>
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<td>2</td>
<td>22-05-2017</td>
<td>ISC</td>
<td>Controller</td>
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<td>3</td>
<td>01-06-2017</td>
<td>FSW</td>
<td>Coordinator Housing</td>
</tr>
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<td>4</td>
<td>01-06-2017</td>
<td>FSW</td>
<td>Director of Operations</td>
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<td>5</td>
<td>08-06-2017</td>
<td>ISC</td>
<td>Ex- Account Manager</td>
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<td>6</td>
<td>08-06-2017</td>
<td>ISC</td>
<td>Team Leader Helpdesk &amp;</td>
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<td>Member Helpdesk</td>
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<td>7</td>
<td>09-06-2017</td>
<td>FSW</td>
<td>Information Manager</td>
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<td>8</td>
<td>09-06-2017</td>
<td>FSW</td>
<td>Controller</td>
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<td>9</td>
<td>09-06-2017</td>
<td>TSG(FSW)</td>
<td>Engineer/Developer/Programmer</td>
</tr>
<tr>
<td>10</td>
<td>16-06-2017</td>
<td>ICTiO(FSW)</td>
<td>Member Team ICTiO</td>
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(* = orientation talk )

For the document analysis, only a user’s agreement between the ISC and the specific faculty has been found. The user’s agreement is a contract between the two parties, which is implicitly renewed each year. This document entails the exact arrangements between the two parties regarding the provision of service, the usage of service and which persons should or can contact each other to fix problems which already occurred or are expected to occur. As stated, this document is considered a form of formal control.

However, this user’s agreement could not be acquired by the researcher, because the organizations were not allowed or did not want to give this document to external parties. Although the actual document could not be obtained, the researcher was offered the opportunity to look into the agreement and, moreover, was allowed to make notes. Thus,
accurate notes of the relevant information within the user’s agreement could be made. These notes, which can be found in appendix 7.3, can be seen as an exact copy of the user’s agreement.

As mentioned above, the interview questions, the detailed interviews, the notes of the user's agreement, the notes of the orientation talk, the list of discussion topics and the list of codes can be found in the appendixes 7.1, 7.2, 7.3, 7.4, 7.5 and 7.6. By combining the different sources of information, reliable conclusions have been drawn about the relationship between the ISC and a specific faculty of the Radboud University (Bleijenbergh, 2013).

3.3 Case

As mentioned earlier, this research has taken place at the Radboud University of Nijmegen. The Radboud University is an educational institution which provides scientific education and is designed to conduct scientific research. Like all other universities in the Netherlands, it provides academic education and grants academic degrees. The university has seven faculties, which are specialized in different departments of science. These seven faculties are: the Faculty of Arts, the Faculty of Law, the Faculty of Medical Sciences, the Faculty of Philosophy, Theology and Religious Studies, the Faculty of Social Sciences, the Faculty of Science and the Nijmegen School of Management. They are all located at the campus of the university.

To provide the primary task of the university as best as possible, the Radboud University Nijmegen is supported by various secondary support services. One of these supportive needs is support in the field of ICT. For the Radboud University, the provider of support on ICT is the ICT Service Centre (ISC). The ISC provides several services: it provides ICT workplaces, workplace support, infrastructural services and the development and management of applications and databases. The ISC provides all these services to every faculty of the RU.

In order to get an understanding of control-contract-trust nexus within the relationship between the ISC and the faculties this research focuses on one particular relationship. This is the relationship between the ICT service of the ISC and the Faculty of Social Sciences (FSW). This faculty studies the behaviour of people and society from various social science disciplines. The FSW has accommodated her education in four educational institutions. The four institutes are Psychology and Artificial Intelligence, Educational Sciences, Social Sciences and the Radboud Center for Social Sciences. They jointly provide education for nearly five thousand students. For the scientific research within the Faculty of Social Sciences there are three institutes, namely the DCC, the BSI and the Radboud SCR. Furthermore, the faculty also has its own support services related to ICT. First of all, the section ICTiO where teachers can ask questions related to ICT in education. Secondly, the TSG, which gives support to research groups by developing and manufacturing mechanical devices, interactive products and stimuli designs for scientific research and education.

Due to the growing importance of ICT in the modern technological world, the influence of the performance of the ISC on the performance of this particular faculty and the Radboud
University will most likely increase. So, the relationship between the ISC and the various faculties will become more important in the future for the RU. Creating a larger understanding of this specific relationship can be essential for the RU.

In the abovementioned relationship, the ICT Service Centre is a shared service centre, because it provides services to the different faculties of the Radboud University, including the Faculty of Social Sciences. Both the faculties and the ICT Service Centre are part of the RU. Where the faculties of the RU try to provide education and conduct research at the best quality possible on a particular area, the ICT Service Centre provides the faculties with ICT services and products. With this providence, they support the faculties with their main task: providing education and conducting research. Together, they try to help achieve the overall goal of the RU, which is facilitating and providing the best education possible to its students and striving to conduct the best research as possible. So, their relationship is considered to be intra-organizational.
4. Control and trust between the ISC and the FSW

Now that the theory and the method have been explained, this chapter goes into the results found in both the document analysis and the interviews. This chapter will present how the relationship between control, contracts and trust for the support services and the faculty of the Radboud University Nijmegen can be diagnosed and improved. These results will be presented in the following order. First, a rational diagnosis will be made. This is done by, firstly, highlighting the concept of control within the relationship. Then, the influence of trust within the relationship between the ISC and the FSW will be discussed. After that, paragraph 4.1.3 will discuss the relationship between these concepts. Secondly, chapter 4.2 will discuss the problems and possible improvements for this specific relationship. Finally, a summary of the results is provided in chapter 4.3.

4.1 Diagnosis

4.1.1 Control

From the interviews it appears that, for the relationship between the FSW and the ISC, there is one contract which can be considered a form of formal control. This contract is the user’s agreement between the two parties. In short, this user’s agreement describes the roles and responsibilities of the two by explicitly describing the services that will be provided and the way they will be provided by the ISC to the FSW. This specific document (appendix C) consists of four parts:

In the first part of the agreement, the client and the contractor are appointed. In this case, it concerns an agreement between the ISC, which is responsible for the delivery of ICT products and services, and the Faculty of Social Sciences of the Radboud University. Furthermore, the duration of the agreement is mentioned. This agreement concerns one year and is renewed tacitly every year, if no important changes have to be made. Also, based on previous years, an indication of the expected costs for the new year is added. Furthermore, this section indicates that the ISC has an obligation of effort in case of calamities. They have the obligation to respond as quickly as possible and they should make sure that the service is in line with the user’s agreement. In every situation, the acceptable recovery time depends on the severity of the problem. In addition, signatures are included by both parties, to make the agreement valid.

In the second part, firstly, the goal of the provision is stated, which is delivering a well-functioning ICT workplace and data storage for the faculty to optimise the performance of RU staff and students. Secondly, this part states that problems have to be reported to the ICT helpdesk of the ISC. This is a department of the ISC, which can be contacted by mail or by phone and is established to provide a contact point for users to ask questions and/or report disruptions. They will try to answer the question or provide a solution for the problem. The most important responsibility of this helpdesk is to react and respond to questions and problems and fix the problems as quickly as possible. The main tasks of the helpdesk are also explicitly stated: registration of problems, ensuring the progress, and providence of feedback to the users of the ICT services. This ICT helpdesk is also responsible for a proper delivery of
questions and requests to the appropriate ISC department(s). Furthermore, the agreement includes the ICT workplace service regarding hardware and software, which goal is to ensure a safe entrance to the RU ICT infrastructure. This should be ensured while using as much standardized software and hardware as possible and also making use of the concern information systems. After that, the reporting is explained. The reporting consists of four components: The number of software and hardware in use, the amount of storage data (split to organizational units/departments), the number of reported and solved incidents and an analysis of possible major disruptions. Moreover, this part also states the responsibilities of the user of the ICT products and services. The user should use the provided products and services in the way they are intended. In addition, the misuse of these products and services is not allowed. Moreover, it is the responsibility of the client; the FSW. In order to ease the contact with the ISC, the FSW also has the obligation to designate someone as ICT contact person. Additionally, the FSW should also appoint people who, in the name of the FSW, are allowed to order ICT products and services. Finally, this part mentions the exact ICT products and services that the ISC provides to the FSW. First of all, the ISC provides workplaces (desktops), which are places at the RU where employees and students can make use of computers and internet. Secondly, they provide laptops and iMacs. However, these are only provided to certain employees. Thirdly, the existence of the ICT helpdesk. This is a department of the ISC that provides service to employees and students. The helpdesk can be contacted by mail or by phone and is established to provide a contact point for users to ask questions and/or report disruptions (from a distance). Lastly, the ISC has an ICT service point that also provides service. However, this service point provides service in cases that cannot be dealt with by phone or mail. People have to physically come to this service point to be helped with their questions or problems.

Thirdly, the agreement shows contact details of the key figures in this relationship. In the appendix these names are not included, but in the actual agreement the names of the directors of both the FSW and the ISC are showed. Furthermore, from the FSW, the names of particular persons are stated who are allowed to order ICT products and/or services. Also the names of the relationship manager and the head of budgets of the ISC are stated.

Moreover, the interviews revealed that there is also a so called ‘DAP’. This is seen as a separate part of the user’s agreement. However, this is a manual for general process descriptions. It describes who, where and when you can contact someone in case of malfunctioning and it also provides some extra information about the provided services and products. The aim of this ‘DAP’ is to ease the contact between the FSW and the ISC. So, it can be considered a tool for the end user rather than a form of formal control.

Although there is only one form of formal control present for this relationship, there are conversations between the FSW and the ISC that take place every two weeks. The account manager of the ISC and the housing coordinator of the FSW are present in these conversations and they talk about the workplaces, about certain updates that have been made or have to be implemented and about issues that have occurred during the past period. In addition, there is an annual conversation aimed at the evaluation of the user's agreement. In these conversations
it is checked whether adjustments should be made to the contract. This is done in the form of checks by both parties for, for example, the number of workplaces of the FSW.

The interviews indicate that this user’s agreement is only used for checking certain numbers throughout the year. For example, the coordinator of housing of the FSW indicates that it is used for data storage. For the amount of data storage a certain tendency can be seen. With the help of these numbers a better estimate can be made for the required amount of data storage for the following year. These numbers can then be discussed directly with the ISC. The agreement can also be used to check numbers related to workplaces at the FSW or the amount of laptops that are used. Furthermore, as indicated, the agreement is annually evaluated to possibly adjust or expand parts for the coming year. The ISC argues that the adaptation of these contracts during the year would not be a good situation, because it will mean that they do not deliver the products and services in accordance with the needs of the FSW. However, at times when things go wrong, the parties can always fall back on the agreement and then the reality and the agreements can be compared.

According to the people that have been interviewed, from both organizations, these user’s agreements can primarily be seen as a cooperation contract. The agreement shows what the ISC has to provide to the FSW, it shows what the customer should do in case of different types of malfunctions (DAP) and it displays some responsibilities of the ISC for the reaction time on problems and malfunctions. Both parties indicate that it is a means of working together because their signing creates a base for cooperation and communication. It provides some clarity about expectations. Furthermore, the FSW asserts that the clarity of the agreements also causes a less grey area and consequently avoids potential conflicts and prevents opportunistic behaviour. The contract thus contributes to the cooperative behaviour of both parties.

Although the agreement provides some clarity, both parties agree that the contracts are flexible. Due to for example the fluctuations of workplaces for employees, there should always be room for flexibility between contracts and practice. So, there is still a lot of room for interpretation. And that is where human interaction, communication and trust come into play.

\[4.1.2 \text{Trust}\]

Despite the presence of the user’s agreement, and the conversations about this contract, both parties state that the presence of trust is most important for this particular relationship. From the interviews it appears that trust within the relationship has grown in recent years. This is mainly due to the reorganization of the ISC, where local ICT support disappeared from the faculty and a central service desk was established, and the efforts of the ISC and the FSW to gain trust by cooperating more actively.

The FSW argues that in these years it became clear to the people of the FSW what they could expect from the ISC. A better collaboration and better communication between the faculty and the ISC arose. In addition, the attitude of the ISC as an organization changed. They increasingly focused on compromising with the customer, were more open to criticisms, and
the account managers were deployed to learn more about the needs and specific issues of the different faculties.

It is also apparent from the interviews that the change in the attitude of FSW employees towards the establishment of the central helpdesk has helped in the development of trust. At the beginning of the process, the employees of the FSW had a lot of resistance to the central helpdesk. Firstly, because the other FSW employees were afraid that the staff, who had to leave at the faculty, would not like it at the helpdesk. Secondly, there was uncertainty about the quality of the assistance that the employees would receive regarding ICT-problems. However, both parties indicate that there are few complaints about the service from the helpdesk nowadays. The employees are increasingly positive about the collaboration and claim that they trust the service regarding ICT workplaces and support of ICT-problems.

According to both parties, this development of trust has arisen from the fact that people are aware that the central helpdesk is much more efficient than the form of decentralized support. Furthermore, the quality of the helpdesk staff has greatly improved in recent years. In most cases, people actually see that problems are solved quickly and sufficient. The attitude of the employees of the ISC has also changed; they really want to help people. Finally, the interviews indicate that there is also trust at the top of these organizations. In particular, this trust is based on the (qualities of) the persons involved in this relationship. For example, it is indicated by the FSW that they really trust the account manager.

Despite the presence of this trust, both parties indicate that there may be less trust at the operational level. On this level people actually face the ICT-problems. The TSG research group, which is dependent on the ISC for some products and product specifications, mentions that the collaboration is sometimes difficult. For example, if the TSG wants to provide certain products with more functionalities, these extra functionalities cannot be realized by the ISC in some cases. The ICTiO also indicates that some updates may take longer than desired. In a short period of time this could cause a lot of frustration. The ISC is also aware of this frustration at the operational level. The ISC account manager states that:

"At the operational level uhm there is often the pain. Of course, the end users suffer most from mistakes. At this level trust comes on foot and leaves on horseback(Interview #1, p.43)."

In order to strengthen the whole relationship, both parties are trying to maintain or even develop this trust, intentionally or unintentionally. From the FSW, this is done by being as clear as possible to the user about certain updates or maintenance. Consequently, the user is informed. So, they know at what times certain programs, systems or workplaces are unavailable. The FSW also tries to provide criticism on the ISC. The FSW mentions that the ISC is taking this criticism more serious nowadays. In addition, the appointment of the information manager may unintentionally be seen as a means of strengthening trust. By creating more overview within the faculty, the relationship can be optimized. From the ISC, it is argued that they try to maintain and improve this trust by providing as much quality and service as possible to the FSW. In addition, the ISC also tries to be as fair and transparent as possible to the customer. Especially when it comes to errors of the ISC itself. The ISC's
account manager also indicates that, in relevant situations, he tries to change the service of the ISC to meet certain needs of people in the faculty. Moreover, he states:

“Aftercare of course. And I always discuss these kind of things with my key figures at contract level to inform them about what is happening in the faculty and what we have done to solve or to help change the problem as smoothly as possible(Interview #1, p.45).”

Even in cases of broken trust, they try to rebuild it as quickly as possible. The account manager of the ISC mentions about these situations:

“At those moments, you have to be very alert to show people that you understand them and that you really want to help them. So when things go wrong and you get a complaint, just take it seriously, even if the complaint, if they seem unjustified(Interview #1, p.43).”

At those moments, the ISC tries to spend as much time as possible to inform the people why something has failed, how it is solved and how it will be prevented in the future. So, this paragraph indicates the presence of cooperative behaviour.

4.1.3 Relationship between control and trust

Due to the development of the ISC, the attitude towards the formal side of the contracts has become more relaxed. The user's agreement is now seen as a basis of the relationship, which can be used in case of emergency or with certain events. The ISC account manager states about this contract:

“The contract is a piece which consolidates what you have conceived together, and that it is sufficient(Interview #1, p.42).”

As mentioned in 4.1.1, it is seen as a cooperation contract, where flexibility is required. The ISC argues that:

“You also need some flexibility regarding what you do in practice and what is described in theory (Interview #1, p.42).”

When drawing up the contract, it is emphasized that:

“This is the base. And if we can do more, we will do it. And, on the other hand, they also realize that they have to do that, because if you're going to stick to the rules of the contract, uhm then it will become very stiff (Interview #1, p.42).”

Both the ISC and the FSW consider the contract as a form of enabling control. The contract is not set up and signed to create a fool proof system, but to maintain flexibility around clear appointments and thus give people options. It is also aimed at calling for an organization’s sense of responsibility and its capabilities. These options can then be discussed in the conversations between both parties. These conversations discuss the state of affairs, possible specific events, major problems that will occur or have occurred or the need for major maintenance.
They also argue that this contract is the base for the development of trust between the two parties. The ISC’s account manager claims that the signing of the contract is already a sign of trust. The FSW acknowledges this and states that it helps to clarify the cooperation. The Coordinator Housing of the FSW states that this clarification is a good start for the cooperation. This person also states that the ISC, with the help of this contract, clearly indicates what they can and cannot do, but also explicitly indicate that they want to help the FSW as much as possible. Due to the contract, the negative expectations about the behaviour of the other party are eliminated.

Finally, it can be concluded that within the relationship between the ISC and the FSW trust and control can be seen as complementary. Through increasingly clear agreements and an open attitude of the ISC, there is an increasing congruence of goals. This shows that control and trust mutually reinforce each other. The contract is not enough to make the relationship work well, but it is necessary. Section 4.1.2 indicates that both parties also deliberately create trust. As both parties indicate, the clarity, the quality and the open attitude lead to trust. The flexibility that accompanies the clarity of contracts provides more trust. Despite the complementary relationship, it should be noted that using too much control to regulate the relationship between the ISC and the FSW could hurt the trust.

4.2 Potential improvements

Despite the fact that the diagnosis indicates that significant improvements have been made in recent years, for both the ISC as the presence of trust within this relationship, some potential improvements have emerged from the interviews. In order to create a clear overview of the problems for both parties, first the potential improvements for the FSW will be discussed. After that, the possible improvements for the ISC will be presented. Before the potential improvements will be mentioned, it has to be said that the problems presented below are based upon the results found in this study and are recommendations. Both parties acknowledge the existence of trust within the relationship and claim that there is a good relationship. However, by implementing these recommendations, the performance of both parties and the trust in each other could further improve.

4.2.1 Recommendations FSW

In order to improve the relationship comprehensively, the FSW should create more clarity in its faculty. First of all, the faculty should provide more clarity to employees and students about where they can address ICT-related questions, proposals or problems. The differences in the work of the TSG, the ICTiO and the ISC need to be emphasized more. This will allow employees to be helped faster and more efficient. An example provided by the employee of the ICTiO, regarding this problem, is that people often ask the ICTiO for help with ICT-related issues. These problems should however be handled by the ISC. To solve these issues the FSW could set up a leaflet for teachers and students to explain where one can address questions related to ICT. This leaflet could explain the tasks of the ISC, the ICTiO and the TSG. In addition, contact information should be included. Then everyone will know how to
reach them and where to find them. This information could also be explained in more detail on the website.

In addition, the FSW will need to create more clarity about the work of the new function: the information manager. The Director of operations of the FSW has indicated that this function has emerged in order to relieve the duties of the account manager. The size of the faculty has shown that it is impossible for the account manager to get to know the entire faculty. According to the director of operations of the FSW, the information manager must be a link where people from the faculty can ask their questions or mention their problems about ICT. The information manager can then go to the relationship manager. He indicates that it must be a collaboration, because the ISC should also have enough knowledge about the faculty. The information manager himself states that there still is reasonable ambiguity about his precise work. At the moment he primarily focuses on the inventory of systems. And in the coming years it will become apparent how big its role in the relationship between the ISC and the FSW will be. This also depends on the clarity and communication of the FSW towards its employees and students. They must be aware of the existence and the work of the information manager. This awareness can be created by adding an explanation about this new function in the leaflet about questions regarding ICT. The information manager could also add its name to emails related to ICT issues. In this way, employees of the FSW could become familiar with the existence of this function and its work.

Furthermore, the TSG employee argues that there is limited feedback from the faculty to the ISC. As a result, the ISC may not be able to estimate how big problems are or how important a particular system is. However, with the appointment of the information manager at the FSW, this problem may already be solved. In the near future, he will probably bundle the feedback from the faculty and transfer it towards the relationship manager.

Finally, the interview with the Coordinator Housing of the FSW indicated that, despite the presence of the ICT service desk, any possible decentralized deployment of ISC staff could also strengthen the relationship. This is because, from the point of view of the FSW, it is sometimes more convenient to deal with problems if someone actually has a physical presence. It is indicated that this decentralized deployment does not have to be faculty specific, but for example, by deploying ISC staff for the entire campus. This would improve the visibility of the ISC and thereby have a positive impact on trust. The ISC argues that in the transition phase, from local ICTs to a central helpdesk, they deployed some ICT staff to work on site. Little use was made of this service at that time, so the ISC questions this form of improvement.

4.2.2 Recommendations ISC

The ISC can also improve the relationship on its part. According to the people that have been interviewed, there is room for improvement in two areas for the ISC. Firstly, the ISC can make improvements in their communication. Firstly, the feedback from the ISC to the users of ICT at the faculty. Frustration may arise for the employees at the faculty when there is no certainty about the time in which problems are solved. Secondly, communication to the FSW
can sometimes take a long time with regard to, for example, questions about certain software. There is little feedback on the process from question to answer. This concerns the lack of clarity about (the time of) the process of answering questions. So, it is mainly about the ignorance of the user. Finally, the TSG indicates that the feedback from the ISC can be improved. In their cooperation with the ISC, the ISC sometimes cannot help the TSG with for example an extra functionality. For the TSG, however, it remains unclear why something cannot be realized. The TSG employee states about this problem:

“That feedback; why is it impossible and where does it get stuck. That is what we would really want to know, because then we can try to solve these things on the long run. But that feedback is quite difficult.(Interview #10, p.95)”

These problems could be solved by indicating the duration of the problem solving process and the duration of a reply regarding the question. When problems occur in the problem solving process or the process of finding an answer, the customer should be informed. For the feedback to the TSG, the ISC should simply be more transparent about their operations and flexibility of products and services. With the improvement of the communication to the customer, there will be more clarity about the ISC’s work at the FSW. In the future this can lead to more trust in the ISC, because the FSW will have greater knowledge about what the ISC can and cannot do.

The second area is the flexibility of products and services. It is about the flexibility that the ISC can offer to the FSW regarding education and research. The interviews with the ICTiO and the TSG show that the flexibility, regarding product and service features and the service for products and services, can be quite a challenge. The TSG employee states that it is difficult to innovate with the ISC. As mentioned in 4.1.1, the example of giving more functionality to products can be appointed again. As a result of little feedback, the employees of the TSG also do not know why things cannot be realized. In addition, the ICTiO employee provides an example about the implementation of updates for a particular software program. They may take longer than expected and desired. Moreover, the teachers themselves sometimes find the need for an update of a particular program. They warn the ICTiO, so they will contact the ISC. Despite the fact that ISC keeps track of all applications, or the updates needed, occasionally, one is not noticed. If an update request is submitted, some time may elapse before the update has actually been implemented by the ISC. That can be very frustrating for the professors of the FSW. In order to speed up this process, the ICTiO can, for example, call the account manager, but this should not really be necessary. By clarifying why something has not happened or cannot happen or by increasing flexibility, with regard to products and services, the ISC can increase the trust in the ISC, which will improve the relationship. The former account manager concludes:

“As ISC, we continuously need to listen and try to find out what they really need in this faculty. (Interview #5, p.76)”

But, despite these points of improvement, the interviews indicate that the attitude of the ISC has already changed positively. The attitude of the ISC towards the customer has become much more open and the ISC really tries to help the faculty. However, as appointed by the
TSG employee, the ISC may have received too little feedback from the FSW in recent years. As a result, the ISC might not have been aware of the importance of the problems regarding flexibility and communication.

4.3 Summary

To summarize, this analysis shows, first of all, that there is only one contract which can be considered a form of formal control. This contract (the user’s agreement) is used as a base for the client-supplier relationship and describes the roles and responsibilities of both parties by explicitly describing the services that will be provided and delivered by the ISC to the FSW. This contract is not only seen as a base for this relationship, but also as a base for the development of trust between the two parties. The analysis shows that trust is very important within this relationship. And mainly due to the reorganization of the ISC and the efforts of the ISC and the FSW to gain trust, the presence of trust has grown in recent years. However, the interviews have also indicated that there might be less trust at the operational level of the FSW. To solve potential problems at the operational level of the FSW and to strengthen the whole relationship, both parties actively try to maintain or develop the overall trust. Finally, the diagnosis concludes that trust and control can be considered complementary within this relationship. Next to this diagnosis, the above analysis also shows that this relationship could potentially be improved. Despite the fact that the diagnosis has indicated that significant improvements have been made in recent years, some recommendations have emerged from the interviews. Where the FSW could provide more clarity to their employees, students and to the ISC, the ISC should consider improving their communication and organizational flexibility.
5. Conclusion & Discussion

This study has focused on the examination of the relationship between trust, contracts and control for the relationship between a specific faculty of the Radboud University Nijmegen, the FSW, and their ICT-provider (ISC). Different steps have been taken to find an answer on the following question:

*How can the relationship between control, contracts and trust for the support services and the faculties of the Radboud University Nijmegen be diagnosed and improved?*

From a rational perspective, the following diagnosis can be made: Firstly, the contract between the ISC and the FSW is a form of control which provides order from the background of the relationship. It is used as a rational tool to base the relationship on and serves as a tool to control the relationship from a distance. A predictable and straightforward consequence of this contract (managerial decision) is trust. By signing the user’s agreement, the ISC and the FSW signal to each other that they are and stay committed to the relationship. The form of trust that arises from the signing is the expectation that the partner does not act opportunistically (thin trust).

Both parties also try to create trust deliberately. Where the FSW tries to communicate to its employees and students and provides feedback to the ISC, the ISC tries to provide quality and transparency to the FSW. An important measure to provide quality is the establishment of the central helpdesk. This helpdesk is set up to create a centralized point where problems regarding ICT can be reported and can be solved. Ultimately, this way of solving problems by the ISC has to improve the quality of the service and should create trust for the relationship with the faculty. The establishment of this helpdesk could also have a relational aspect, because it could perform within its network. The impersonal contact that employees experience, regarding the process of solving problems and the service, could potentially decrease the trust within the relationship. This impersonal contact could also be linked with the response time and the quality of response to have a potential negative impact on trust. So, the ISC’s helpdesk might influence the relationship in a different way; it might decrease trust. However, both parties take rational decisions to maintain or improve the present trust. This form of created trust is about positive expectations of the behaviour of the other party. This is based on the willingness to cooperate and to think in the interests of the other party (thick trust).

Although the FSW also tries to actively develop trust, some actions, which could influence the trust for this relationship, are not deliberately taken to create trust. The appointment of the information manager is done to create more overview within the faculty about the problems and questions surrounding ICT without the involvement of someone from the ISC. From a relational perspective, this rational choice could also affect the relationship unintentionally. This information manager could improve the quality of the ISC by informing the ISC continuously about problems and questions that appear at the faculty. So, by creating more overview within the faculty, the relationship could be optimized and could improve the level of trust.
With the help of data usage reports, the ISC also uses relational signals. By showing the data usage for a month, including benchmark numbers, the FSW could potentially take measures to prevent that costs will become too high for the faculty. By sharing this information, the behaviour and decisions of the FSW are influenced and it indicates that the ISC is willing to prevent unpleasant situations for the FSW. The ISC thus tries to help the FSW (the RU) with this tool of information. Taking a relational perspective into account, these (rational) data usage reports by the ISC could affect the behaviour of human actors within the Faculty of Social Sciences. These reports, which are provided by the ISC to the FSW on a monthly basis, indicate the total amount of data usage for one month and include additional benchmark numbers. As indicated by the controller of the FSW, there is a tendency of data usage in recent years. This trend could potentially influence the behaviour of the employees of the FSW. For example, the employees of the FSW could have to lessen their data usage in the next months due to a rise in data usage. So, it could be seen as a non-human actor that performs within this network.

Another relational signal could be the DAP. By providing a manual with general process descriptions and contact information, which describes who, where and when you can contact someone in case of malfunctioning, the ISC tries to increase the efficiency regarding contact between the FSW and the ISC and service for the FSW. By providing this information, the behaviour and decisions of the FSW are influenced and it indicates that the ISC is willing to help the FSW with information that shows the most efficient and most easy way to solve ICT-related problems for the employees of the FSW. This rational instrument also has a relational element. The DAP could potentially influence the behaviour of the employees of the FSW. By showing who can solve certain problems, ambiguity will be avoided and solutions can be provided as soon as possible. This is because the end user can immediately inform certain people or departments about its problem. However, possessing such an overview could also ensure that people try to avoid certain persons or departments like the helpdesk. Consequently, other people or departments could be distracted by problems and questions. Thus, this non-human factor could also perform within its network.

Moreover, the conversations between the two parties also have the relational signalling aspect of demonstrating the willingness to cooperate. This is because these conversations enable the ISC and the RU to jointly solve problems. Within these conversations the parties also demonstrate that they are willing to think in the interest of the relationship. So, the conversations between the ISC and the RU can be seen as a vehicle for relational signalling.

Finally, within the relationship between the ISC and the FSW trust and control can be seen as complementary. Control and trust mutually reinforce each other, because clarity in the contract has created a base on which trust is built. As a consequence, there is an increasing congruence of goals. Consequently, positive expectations about future contributions to the relationship will be produced.

This rational diagnosis of the relationship of control-contract-trust nexus at the RU has resulted in some potential areas of improvement for both parties, which are formed into suggestions in chapter four. The FSW could provide more clarity to employees and students
about where they can address ICT-related questions, proposals or problems and about the new function of information manager. Furthermore they should provide more feedback to the ISC. To solve these issues the FSW could set up a leaflet for teachers and students to explain where one can address questions related to ICT. If students and employees know where to find the information manager, the feedback to the ISC will become better as well. The ISC could improve in two areas. They could improve their communication by indicating the duration of the problem solving process and the duration of a reply regarding the question. They could be more transparent to the customer. The ISC could also pay attention to the inflexibility of the organization(of products and services). However, by clarifying why something has not happened or cannot happen, this inflexibility will not become a major issue for the faculty.

In conclusion, the answer to the central question of this study can be formulated as follows: For the client-supplier relationship, in which the ISC provides ICT service to the FSW, a form of formal control is used as a base for the relationship. Trust, however, is the essential factor in the regulation of the intra-organizational relationship and the mentioned form of formal control provides room for the development of this trust within the relationship. In addition, both parties, intentionally or unintentionally, try to create and develop this trust with the help of communication and clarity. The relationship between control and trust can thus be considered complementary. To improve this intra-organizational relationship the FSW could potentially provide more clarity to its employees, students and to the ISC. A suggestion for the ISC could be to improve their communication to the faculty and to improve the organization's flexibility.

Regarding this conclusion, however, it should be noted that the FSW is forced to cooperate with the ISC, because the FSW has no other alternatives for the provision of ICT service. This obligation creates an inevitable long-term relationship. Moreover, the obligation to work with each other might have effect on the creation or the development of trust.

Moreover, the conclusion shows that the rational perspective is reflected in the relationship between the FSW and the ISC. So, this perspective can be considered useful to discover and understand the relationship between control and trust. Diagnosing the control-contract-trust nexus with the help of the rational perspective can therefore be seen as a good choice of the researcher. Although a lot of results have been found, from a rational perspective, the addition of relational elements provided more understanding of this specific situation. By also focusing on relational elements of rational aspects, a possible tunnel vision has been avoided and a greater understanding of the control-contract-trust nexus for this particular relationship has been created. If only a rational perspective was taken, a lot of results would not have been found.

If this study, at the start of this research, had chosen for a relational perspective to diagnose the control-contract-trust nexus at the Radboud University, other results would have been found. For this perspective no analytical design framework had been used to set up a diagnosis. Furthermore, the researchers, theories and frameworks would all have been part of the network of associations. That would have resulted in some conclusions which could be of conceptual relevance to practitioners. By taking a relational perspective, the results could
have offered the practitioners an opportunity to reflect on decision situations (Drost et al., 2016). However, by incorporating some relational elements from rational aspects, some of the relational elements, that would have been found in that case, have already been taken into account in this study.

Overall, this study indicates that there is no need to question the existing literature and it also shows that a rational perspective, and the inclusion of relational elements thereof, can lead to a comprehensive analysis and understanding of a intrafirm relationship. To contribute to the current body of knowledge on the relationship between control and trust for intra-organizational relationships, this study could potentially function as prove for scientists to consider developing a combined perspective. With the help of a mix of different perspectives, the understanding and diagnosing of the control-contract-trust nexus could potentially improve. Moreover, this study demonstrates that perspectives based on inter-firm relationships can also be used for the investigation of the control-contract-trust-nexus within intrafirm relationships.

5.1 Limitations

But, it should be noted that this study is limited, because this study has investigated only one specific relationship; between the FSW and the ISC. More extensive research is needed to diagnose and improve the trust and control relationship for the relationship between the ISC and the Radboud University as a whole. Moreover, the relationship with other support services should also be studied to get a more comprehensive understanding of the relationship between control, contracts and trust for the support services and the faculties of the Radboud University Nijmegen.

In line with this limitation is the limited external validity. Many universities will be different and a lot of these universities might have different relationships with their ICT provider or with other support services. That is why these results may not be applicable to other relationships. However, the overall goal of this study was to derive theoretical implications on the control-contract-trust nexus from a context specific diagnosis.

Furthermore, only one point in time was investigated in this study. To get a greater understanding of the relationship between FSW and the ISC, this case could be investigated on another point in time or over a period of time. This might provide information about the behaviour and the change of control and trust.

A final limitation of this study could be the fact that the contract could not be fully retrieved. The agreement presented in appendix 7.3 does not include the whole agreement, because the organizations were not allowed or did not want to give this document to external parties. However, although the actual document could not be obtained, the researcher was offered the opportunity to look into the agreement and, moreover, was allowed to make notes. So, the agreement shown in the appendix consist of notes taken by the researcher.
5.2 Possibilities for future research

To overcome these limitations or to add new knowledge to this field of research in the future, some suggestions of potential research areas will be mentioned. First of all, future studies can study the control-contract-trust relationship of the ISC with other faculties of the Radboud University. The situation of the relationship between the FSW and the ISC could possibly vary from the relationships of the ISC with the other faculties. More specific, the controller of the ISC mentioned that the faculty of mathematics has a different relationship with the ISC, because they also have a own department for ICT. Different results might be found for this reason.

Future research could also focus on other types of service providers at the Radboud University. In that way, the dynamics of control and trust between different service providers in relation with the RU can be compared. A third potential research area could be to study this specific relationship for another university and their ICT support services. Results and insights about a similar situation could provide a more comprehensive view which adds to the existing body of knowledge on trust and control.

Studying other types of organizations, in their relationship with shared service centres, could be a fourth potential research area. Other types of organizations will have other goals than universities and will have different forms of control in place to reach these goals. Moreover, their usage of trust could potentially vary from the usage of trust for intra-organizational relationships of universities. By studying these potential research areas, a broader understanding of the relation between control practices, contracts and trust building processes within intra-organizational firms can be accomplished.

A final suggestion could be to diagnose this relationship from another perspective or to add an additional perspective to the literature review of this study. By implementing a new approach of the relationship between control and trust, to look at the control-contract-trust nexus, more insight and understanding could be created. For example, the trust-as-practice perspective of Mahama & Chua(2016). This perspective argues that trust or non-trust, and its presence or absence, is very situational and is related to time. According to this perspective, trust can differ in periods of time. It also considers trust to be as a continuous and dynamic flow of ties, which could have cycles(Mahama & Chua, 2016). By implementing the trust-as-practice perspective of Mahama and Chua(2016) in the theoretical framework, research on another point in time or over time could be done. It could serve as an additional perspective to look at the control-contract-trust nexus.
6. References


7.1 Appendix A – Semi-structured interview questions

Checklist before every interview:

✔ Introducing researcher
✔ Relevance of study and interview
✔ Use of information
✔ Anonymity interviewee
✔ Permission recording

General:

– What is your function?
– How is this function related to the relationship between the FSW and the ISC?

Control:

– Is there any form of formal control used within the relationship between the FSW and the ISC?
– Which forms of formal control are used?
– How often do you look at these formal controls/contracts?
– Is the form of control an incentive to work together?

Trust:

– Do you think there is trust within the relationship between the FSW and the ISC?
– Why do you think that?
– Where does this trust come from?

Relationship Control and Trust:

– How do you see the relation between trust and control in the relationship between the FSW and the ISC?
– Do the forms of control ensure that trust can develop in the relationship?
– Has there been any change in the degree of control and trust in recent times?
– Will more control decrease the trust between the FSW and the ISC?
– What happens when trust is broken?
– Can time ‘heal’ broken trust?
– Can the amount of trust between FSW and the ISC fluctuate over time?
– Are there specific actions taken by one of the parties to develop trust?

Problems:

– Are there, in your opinion, problems within the relationship between the FSW and the ISC?
– Are these problems related to the user’s agreement? How?
– Or does the user’s agreement provide enough control in order for the relationship to work?
– Is there enough trust from both organizations in order for the relationship to perform well?

Solutions to problems:
– How can these problems in the relationship between the FSW and the ISC be solved?
– Should the user’s agreement or any form of control be changed to improve the relation between the FSW and the ISC? And how should it be changed?
– Do you think that the role of trust within the relationship between the FSW and the ISC should be changed?
7.3 Appendix C – User’s agreement of 2016/2017 between the Faculty of Social Sciences and the ICT Service Centre.

General Information:

The ISC has user’s agreements (dienst-verkopers overeenkomsten, DVO) for relationships with faculties, clusters and other units. These agreements concern the conditions for services in the field of ICT. These services should be in line with the needs of the buyer and ultimately aim at standardization. Additional service is possible, but it may cause additional costs for the customer.

This agreement does not include the whole agreement, because, for an outsider, it is not allowed to digitally acquire the agreement. So, the user’s agreement shown below consists of notes taken of the actual user’s agreement by the researcher. Because the actual user's agreement has been drawn up in Dutch, the notes are also taken and shown in Dutch.

Dienstverleningsovereenkomst(DVO)

1. Overeenkomst:
   - Opdrachtgever: FSW
   - Opdrachtnemer: ISC
   - Overeenkomstduur: 1 jaar. Deze overeenkomst wordt ieder jaar, indien er geen bijzonderheden zijn, stilzwijgend verlengd.
   - Indicatie van de te verwachten kosten over het nieuwe jaar.
   - Escalatie: Bij calamiteiten heeft het ISC een inspanningsverplichting om de service zo snel mogelijk conform de DVO te leveren. De (acceptabele) hersteltijd is afhankelijk van de ernst van de situatie.
   - Ondertekening door beide partijen.

2. Algemene dienstverlening:
   - Doel van de levering: Het doel van de service is het leveren van een goed functionerende ICT Werkplek en van dataopslag op het RU bestandssysteem, waarmee RU medewerkers en studenten hun werkzaamheden optimaal kunnen uitvoeren.
   - Storingen, die diensten uit de DVO betreffen, dienen gemeld te worden bij helpdesk. De ICT helpdesk behoort zo snel mogelijk te reageren en is daarvoor verantwoordelijk.
   - Niet-acute problemen, voorstellen omtrent wijzigingen, vragen en verzoeken, dienen gemeld te worden bij de ICT helpdesk.
   - Taken van de ICT helpdesk betreffen: registratie, bewaking van de voortgang en terugmelding.
   - De ICT helpdesk geeft verzoeken door aan de betreffende afdeling van het ISC.
   - Voor eventuele verzoeken kan advies worden gevraagd aan het relatiebeheer van de ISC.
ICT Werkplek: Hardware en software:

Doel van de RU werkplek service is het veilig toegang krijgen tot de RU ICT infrastructuur, gebruikmakend van zoveel mogelijk gestandaardiseerde hard- & software en gebruikmaking van de concern informatiesystemen.

Dataopslag:

Voor zowel studenten als medewerkers wordt een opslagmogelijkheid, geschikt voor de opslag van kritische data geboden. De hiervoor beschikbare faciliteit is het RU Bestandssysteem.

Rapportage:

- Aantal in gebruik zijnde eenheden hard- en software.
- Hoeveelheden dataopslag, opgesplitst naar organisatie-eenheid/afdeling.
- Aantal bij de ICT aangemelde en opgeloste incidenten.
- Eventueel een analyse van een grote verstoring.

Verantwoordelijkheden opdrachtgever:

- Apparatuur gebruiken waarvoor zij bedoeld is, niet misbruiken.
- Opdrachtgever dient een ICT-contactpersoon aan te wijzen. Deze functionaris zal ICT gerelateerde zaken contacteren.
- Bestelbevoegden moeten worden aangewezen, zij mogen ICT-middelen bestellen bij het ISC.

Afgenomen producten/diensten:

- RU-werkplek (desktop): medewerker;
- RU-laptop: medewerker;
- RU-werkplek: student;
- RU-Imac: medewerker;
- RU-werkplek: special;
- ICT helpdesk;
- ICT service punt.

3. Contactgegevens
7.4 Appendix D – Notes taken during orientation talk with the ISC

**Talk with:** Director/Spokesperson of the ISC  
**Date:** 10-04-2017

Questions from the spokesperson of the ISC:

- Why is it relevant to study this relationship?
- What is the plan?

Information about the ISC:

- History: a couple of years ago there has been a reorganization; the GDI and the UDI formed together.
- There are documents which provide some formal control for the relationship with the faculties of the Radboud University: User’s agreements.

Information about the (control and trust) relationship:

- The ISC uses user’s agreements for the different faculties, including the FSW. However, the spokesperson mentioned that the relationships are mostly based on trust.
- Every year, contracts are made or revised about the workplaces, amount of data storage and costs.
- Providing service: If problems occur, the helpdesk of the ISC tries to solve these problems as quickly as possible. If the problems are not yet solved, the spokesperson will intervene to solve the problem.
- The focus of the ISC is on trust. Too much control leads to inflexibility for solving problems. All the ISC want is to provide service, to prevent incidents and, if they occur, to solve incidents as quick as possible. However, a certain amount of control is needed.
- According to the spokesperson of the ISC, communication is essential for the development of trust for the relationship between them and the faculties.
### 7.5 Appendix E – Essential topics for interview questions

<table>
<thead>
<tr>
<th>Topics</th>
<th>General</th>
<th>Rational Perspective</th>
<th>Relational Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control</strong></td>
<td>- Are forms of controls used?</td>
<td>- Are controls used as instruments by humans?</td>
<td>- Are controls formed within a network?</td>
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<tr>
<td></td>
<td>- What controls are used?</td>
<td>- Do controls also have unintentional influence on people’s behaviour?</td>
<td></td>
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<td></td>
<td>- Coercive or enabling controls?</td>
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<td></td>
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<tr>
<td><strong>Trust</strong></td>
<td>- Does trust come into the relationship?</td>
<td>- Are signals used to create or maintain trust?</td>
<td>- Is trust related to people in this relationship?</td>
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<tr>
<td></td>
<td>- When does trust come into the relationship?</td>
<td></td>
<td>- Can broken trust be healed?</td>
</tr>
<tr>
<td></td>
<td>- Is more trust needed?</td>
<td></td>
<td>- How can broken trust be healed?</td>
</tr>
<tr>
<td><strong>Relationship control and trust</strong></td>
<td>- Do the forms of control ensure that trust can develop in the relationship?</td>
<td>- Do you think control and trust are complementary or substitutive?</td>
<td>- Do you think trust is created in a network, by the interaction of both people and formal controls?</td>
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<tr>
<td></td>
<td>- Has there been any change in the degree of control and trust in recent times?</td>
<td>- Or do they interact (both complementary and substitutive at the same time)?</td>
<td>- Can trust, control and their interaction be seen as unpredictable network effects?</td>
</tr>
<tr>
<td><strong>Problems (‘bottlenecks’)</strong></td>
<td>- Are there any problems within the relationship?</td>
<td>- Do you think trust and controls are instruments to be used by humans?</td>
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<tr>
<td></td>
<td>- Is there enough trust between the FSW and the ISC?</td>
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<td></td>
<td>- Are formal controls alone enough to regulate the relationship between the FSW and the ISC?</td>
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<td></td>
<td>- Do situations occur with conflicting</td>
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<tr>
<td><strong>interests?</strong></td>
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<tr>
<td>- How is dealt with these situations?</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Solutions to problems(‘bottlenecks’)</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>- Is there any room for change or improvement in the relationship?</td>
<td></td>
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<tr>
<td>- Could you mention some possible changes or improvements?</td>
<td></td>
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8. Planning

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-02</td>
<td>Contact ISC &amp; Faculties</td>
</tr>
<tr>
<td>28-03</td>
<td>Handing in the research proposal</td>
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<tr>
<td>10-04</td>
<td>Handing in MHT supervision document</td>
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<tr>
<td>13 t/m 20-04</td>
<td>Vacation</td>
</tr>
<tr>
<td>21-04 t/m 24-04</td>
<td>Feedback &amp; completing introduction</td>
</tr>
<tr>
<td>25-04 t/m 30-04</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>01-05 t/m 05-05</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>06-05</td>
<td>Sending thesis to Vosselman</td>
</tr>
<tr>
<td>08-05 t/m 12-05</td>
<td>Appointment + processing feedback</td>
</tr>
<tr>
<td>15-05 t/m 02-06</td>
<td>Gathering data(&amp; writing chapter 4)</td>
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<tr>
<td>03-06</td>
<td>Sending thesis to Vosselman</td>
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<tr>
<td>05-06 t/m 09-06</td>
<td>Appointment Vosselman + processing feedback</td>
</tr>
<tr>
<td>12-06 t/m 16-06</td>
<td>Writing chapter 5 &amp; 6</td>
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<tr>
<td>16-06</td>
<td>Handing in first version</td>
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<tr>
<td>19-06 t/m 23-06</td>
<td>Appointment Vosselman + processing feedback</td>
</tr>
<tr>
<td>30-06</td>
<td>Handing in final version</td>
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