MASTER

Consultant relationship management
a case study on a Vendor-Consultant Relationship

Baars, T.G.C.

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Consultant Relationship Management: A case study on a Vendor-Consultant Relationship.

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In partial fulfillment of the requirements for the degree of

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In Innovation Management

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Management Summary

Network Inc. is an internationally operating company that sells hardware and software for enterprise network infrastructures. This entails all products needed for wireless connectivity, from hardware products like switches and routers to software packages for security and network management. Most of their product sales goes through an indirect sales channel which involves a distributor and a partner that eventually sell the product to the customer. Therefore, they manage several relationships within their sales channel.

Whereas Network Inc. is closely managing its partners and has a dedicated sales team on its clients, they recognize the growing importance of consultants. These consultants are asked, by the client, to assist them in the buying decision. They have more knowledge about the newest technologies in networking and experience with buying processes. Dependent on the type of knowledge they share, they have the ability to influence the clients’ decision on what products to buy from what vendor. Considering the dominant position of Cisco, the market leader and biggest competitor, knowledge about their portfolio is well spread whereas knowledge about the Network Inc. portfolio is not. Figure 1 illustrates the relations that Network Inc. has with the partner and client and relationship between client and consultant. A relationship between Network Inc. and the consultant does not exist currently.

![Figure 1: Sales channel relationships](image)

Network Inc. recognizes the problem of limited consultant knowledge about their portfolio and the effect this has on the buying decision of the client in favor of competitors. It is assumed that if consultants would inform its clients more about the Network Inc. portfolio, this could lead to an increase in sales. The goal of this study is to find a solution for the problem that Network Inc. is facing.

The growing role of consultants as third party advisors in purchasing and the implementation of IT and IS has resulted in research on several different topics concerning consulting services. These topics include the client-consultant relationship (Sturdy, 1997; Fincham, 1999; Mohe & Seidl, 2011; Pozzebon &
Pinsonneault, 2012) the effect of consultants involvement (McClachlin, 1999; Dawes, et al., 2007; Ashurst, et al., 2008) consultants capabilities (Swanson, 2010; Wang & Ramiller, 2009) knowledge transfer (Werr & Stjernberg, 2003; Jacobsen, et al., 2005; Ko, et al., 2005; Gable, 2005; Fincham, et al., 2008) and the role of consultants in technology diffusion (Bessant & Rush, 1995; Wang, 2010). Although extensive research has been done on the role of consultants in the adoption of new technology by firms, the vendor of these new technologies are hardly mentioned in research considering consultants.

Research Purpose

Research questions: How can the establishment of a vendor-consultant relationship create competitive advantage for Network Inc.? The goal of this study will be to create a design as a solution to the problem of Network Inc. After analysis of the results a design will be made. This design will contain detailed implementation steps and examples how Network Inc. can solve its problems and how these steps will lead to the desired solutions.

Main Theoretical Findings

Consulting is broadly defined as a process of transferring expertise, knowledge, and/or skills from one party (the consultant) to another (the client) with the aim of providing help or solving problems (Jacobsen, et al., 2005). They are outside experts which have knowledge insiders don’t have (Fincham, et al., 2008). Consultants can play various different roles (Bessant & Rush, 1995) ranging from collaborating with the client to having full autonomy to run the project (Pozzebon & Pinsonneault, 2012). Swanson (2010) explains the different types of consultants that exist and how they are linked to the stages of an implementation. Whereas a strategy consultant is focused on assisting the client with formulating a future strategy, a technical consultant is focused on the technical aspects that come along new innovation. They are more often hired for their technical knowledge. Knowledge is the main asset for consultants (Werr & Stjernberg, 2003) and knowledge gathering and keeping it up-to-date is therefore very important. Werr & Stjernberg (2003) describe how this knowledge can be specific, often project related, or more general, for instance market knowledge.

Although consultants sell their expertise about products of the vendor, relationships between the parties are not described. Wang & Ramiller (2009) do describe how both parties are active in the same knowledge sharing community and follow up on each other closely in sharing knowledge about new innovation. Patterson & Dawes (1999) go a step further and state the importance of information sharing from vendor to consultant. A link between the two parties would therefore make sense according to literature and confirms with the need as identified by Network Inc.

Research Methodology

To answer the research question considering a vendor-consultant relationship the grounds on which the relationship will be built on needed to be identified. Therefore, the way in which consultants work, what their projects look like and what their needs and unique selling points are, needed to be identified and a case study research method was most suitable.

The data is collected in 12 semi-structured interviews with networking consultants. The sample included different types of consultants as described by Swanson (2010). In these interviews, the consultants are asked to describe 2 types of cases: a non-innovative case and an innovative case. This multiple-case
study approach enabled to identify how consultants work in different types of projects and identify similarities and differences across the types of consultants and projects. The consultants were asked to describe the cases according to identified topics as discussed in research literature.

Results

The results indicate that clients make the final decision which vendor to buy its products from. This choice can be influenced by many factors. Whether the consultant can influence the decision of the client depends on these factors as well. A clear difference between technology consultants and strategic consultants was identified. A technology oriented consultant is most often approached when a more standard solution is needed which needs to be tailored to the clients needs. He has more autonomy in his project and the price of the products is more important. Strategy consultants are more often approached for customized solutions. They have a more collaborative role and the importance of product quality is bigger. They are involved at the earliest stages. Although technology consultants have more autonomy, strategy consultants have more ability to influence the choice for the vendor that is made by the client. Though whether this will have a positive effect for Network Inc. depends on the knowledge of the consultant about Network Inc. products. Therefore, knowledge sharing between the vendor and consultant is crucial and should be tailored to type of consultant.

To evaluate how knowledge sharing by the vendor can have positive effects for all parties, a framework is constructed. The framework describes how increased knowledge sharing by the vendor can be done through direct contact, in which specific knowledge is communicated, and through online channels, in which generic knowledge is communicated. This will increase the consultant’s combinatory knowledge which will increase the possibility that the consultant can align his solution better with the needs of the client.

Currently, the knowledge sharing capabilities of Network Inc. with consultants are not sufficient and should be improved. After discussing the causal relationships, design principles are formulated using CIMO-logic. These design parameters consider employee engagement, improving the contact possibilities for consultants, improving specific content and organizing events. The design principles are then used to formulate design steps for Network Inc. to improve its knowledge sharing with consultants. The following steps were formulated:

Step 1: Creating a project team
Step 2: Creating the database: finding & approaching consultants
Step 3: Creating an online platform: Customizing Superheads
Step 4: Organizing Events
Step 5: Evaluating program success and formulate future strategy

Implications of the design are the difficulty to measure the results and outcome of the relationship with consultants. Therefore, the design is tailored to be implemented with a low investment of resources to first test the added value and convince management before investing in, for instance, a dedicated CRM program. Due to the lack of literature specifically focused on the relationship between vendor and consultant, the research has an exploratory nature with a design science conclusion in the form of design principles and an implementation design. Although there are several limitations which affect the outcome of this research, it should be evaluated as a starting point for future research on this topic which should test the success of the design. Future research should focus on getting into more detail on the vendor-consultant relationship and improving the lack of empirical research on consultants.
Preface
This master thesis marks the end of my Masters Innovation Management at the Technical University Eindhoven. I’ve always been convinced that I would graduate at University but by taking the creative road through University of Applied Science and Pre-master, it has become a rather long journey. Although the last hurdle was a challenging one, it taught me a lot and makes me feel like I am ready for the next step.

I want to take this opportunity to thank my supervisors at the University. Ksenia Podoynitsyna for guiding me even though I was stubborn enough to change to a subject she was less familiar with. Michel van der Borgh for his assistance in guiding me through the visualization of my results and special thanks to Jimme Keizer for stepping in at the last moment and helping me to find the right structure and clear focus.

I would also like to thank PC Enterprise for the opportunity to do my research in such an interesting environment about this challenging topic. I would like to thank the Network Inc. team for their help and explanation about the company structure and the coffee breaks. Special thanks to Vincent Adolfs for supervising me for six months and helping me with all information I needed at any moment. Last but not least I would like to thank all interviewees that were willing to cooperate.

Enjoy the read!
Tim Baars
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1. Introduction

1.1. Practical Background

In November 2015 a large computer company split up in 2 separate companies: PC company and PC Enterprise. PC company focuses on personal systems and printing whereas PC Enterprise will focus on “next generation of technology infrastructure software and services for the New Style of IT”. PC Enterprise has a leading position in servers, storage, networking, converged systems, services and software.

In May 2015, PC Enterprise acquired Network Inc., which is specialized in networking services. PC Enterprise had its own networking division, called HP Networking, which was not successful enough in the Wireless-LAN (WLAN) market and had a small market share. To enlarge market share, they acquired Network Inc. and due to the great value of the Network Inc. brand and the better WLAN market position of Network Inc., PC networking was extended by the Network Inc. portfolio and brand name.

PC Enterprise is divided in 4 business groups: Enterprise group (EG), Enterprise Services, HP Financial Services and Software. EG is focused on sales of different product types and divided in several Business Units (BU) of which the most important ones are Networking (Network Inc.), Servers, Storage and technical services. This research will focus specifically on the PC Enterprise/Network Inc. business unit.

Network Inc. sells hardware and software for enterprise network infrastructures. This entails all products needed for wireless connectivity, from hardware products like switches and routers to software packages for security and network management. Their products are focused on #GenMobile, the new generation that expects to be safely connected anywhere, with any device.

Based on WLAN market share specifically of the 4th quarter 2015, PC Enterprise-Network Inc. has a market share of 17.6% making them the second largest networking vendor behind Cisco (market share of 44%) (PC Enterprise Network Inc. market shares Q4, 2015). According to IDC (2015), Network Inc. is a leader in WLAN considering their capabilities and strategies (Appendix 1). Gartner group, whose technology assessments are the most widely recognized in the IT industry (Swanson, 2010), confirms this in their “Magic Quadrant”, which assesses competing technology providers on the two dimensions of vision and execution. Network Inc. is one of the leaders considering their completeness of vision and capability to execute (Gartner, Inc., 2015). When considering the visionary skills of Network Inc., it scores higher than Cisco (Appendix 2) which illustrates their innovativeness.

Considering the global IT market in total, Network Inc. is involved in software, devices and IT Services. Spending in these sectors are forecasted to grow 6.2%, 0.8% and 4.1% respectively (Appendix 3), illustrating the growth potentials of the market.

![Figure 1: Network Inc.'s indirect sales channel](image-url)
Sales Channel.
The Network Inc. BU in the Netherlands is purely focused on sales and to understand the structure of the BU, the sales channel will be explained first. In 92% of the cases, Network Inc. handles an indirect sales channel consisting of a Distributor and Partner as can be seen in Figure 1.

Vendor (Network Inc.): Hardware & software vendor. The Network Inc. BU in the Netherlands is responsible for the sales of those solutions. They are the vendor in the value chain.

Distributor: Distribute products from different vendors to the different partners. So both Network Inc. as well as competing vendors like Cisco, Dell and Juniper sell their products to distributors which sell them to partners.

Partners: A “Partner” is a status for a company that sells the infrastructure from different vendors and combines it with services which they sell as a total infrastructure solution. Additionally, they can perform services, like implementation and support of the infrastructure.

Client: The client buys its products and services from the partner.

Since Network Inc. uses an indirect sales channel, extensive management of the sales channel is needed. This entails knowledge sharing and close relations with its partners and extensive marketing to its clients.

Partners are companies that sell and service infrastructures from multiple vendors, which include competitors from Network Inc. like Cisco, Juniper, Dell etc. Partners are licensed to sell and service Network Inc. products and have different ranks: Business partner, Silver, Gold and Platinum. Partners can earn these ranks by investing in courses and certifications on Network Inc. products, implementation and maintenance. Network Inc. has a specialized (online) partner program on which courses are available and has extensive relations with their partners. An important note is that a company can only become partner when they have a certain level of turnover based on Network Inc. Product sales. Besides the level of certifications and knowledge, this turnover is decisive for the rank of

Figure 2: Business Unit Structure and number of employees
the partner.

Network Inc. also tries to influence clients through extensive marketing and dedicated sales force. The Network Inc. sales employees play an important role and work together with partners on a sales opportunity of a client. To be able to manage the sales channel the Network Inc. business unit contains several employee roles. The structure of the Network Inc. business unit can be seen in Figure 2. The Sales specialist is focused on informing the client. Partner account manager is focused on partners. Presales specialists are assisting Sales specialists and Partner account managers when extensive technical knowledge is needed.

Whereas Network Inc. is closely managing its partners and has a dedicated sales team on its clients, they recognize the growing importance of consultants. These consultants are asked, by the client, to assist them in the buying decision. These consultants have more knowledge about the newest technologies in networking and experience with buying processes. Dependent on the type of knowledge they share, they have the ability to influence the clients’ decision on what products to buy from what vendor. Considering the dominant position of Cisco, knowledge about their portfolio is well spread whereas knowledge about the Network Inc. portfolio is not. Some Network Inc. employees mention consultants being “cisco-minded” whereas they always propose Cisco solutions to their clients and don’t even consider other vendors.

Figure 3 illustrates the relations that Network Inc. has with the partner and client and relationship between client and consultant. A relationship between Network Inc. and the consultant does not exist currently.

Since there are consultants that are involved with clients in implementation projects of Network Inc. products, they do get access to information. Network Inc. employees stated they do have some contact with consultants and they do share knowledge with them from time to time. Though these relations are
not structurally maintained. They did organize small knowledge sessions for consultants but these were spontaneous initiatives from 1 or 2 employees. There is no structure behind it, no responsibility for an employee nor a goal to strive for.

**Problem Description**

Network Inc. recognizes the problem of limited consultant knowledge about their portfolio and the effect this has on the buying decision of the client in favor of competitors. It is assumed that if consultants would inform its clients more about the Network Inc. portfolio, this could lead to an increase in sales. The goal of this study is to find a solution for the problem that Network Inc. is facing.

**1.2. Background**

Since consultants are the main topic of the research problem, a short description of theoretical background will give insight into the development in IT and consulting literature. This will enable to illustrate the field of literature in which will be searched for a solution and formulate research questions.

Information Systems (IS) and Information Technology (IT) has become an increasingly ubiquitous and integral part of the modern organization. It has the potential to enhance performance, at the operational and strategic level, which are associated with very significant amounts of organizational change (Ashurst, et al., 2008).

IT can be used to help develop markets, increase sales turnover, raise profitability, secure the positions within the industries and gain competitive edge (Thong, et al., 1994). In some cases though, firms strive for parity within their industry, where with rapid change and turbulence, many inevitably play catch-up (Swanson, 2010). Due to the increased complexity and scale of enterprise systems, a key factor for a successful implementation is the utilization of third-party consulting firms to provide the necessary technical expertise and project management skills. As a result, consulting firms are playing a growing and critical role in IS development and implementations (Liberatore & Luo, 2010).

The growing role of consultants as third party advisors in purchasing and implementation of IT and IS has resulted in research on several different topics concerning consulting services. These topics include the client-consultant relationship (Sturdy, 1997; Fincham, 1999; Mohe & Seidl, 2011; Pozzebon & Pinsonneault, 2012) the effect of consultants involvement (Mclachlin, 1999; Dawes, et al., 2007; Ashurst, et al., 2008) consultants capabilities (Swanson, 2010; Wang & Ramiller, 2009) knowledge transfer (Werr & Stjernberg, 2003; Jacobsen, et al., 2005; Ko, et al., 2005; Gable, 2005; Fincham, et al., 2008) and the role of consultants in technology diffusion (Bessant & Rush, 1995; Wang, 2010). Although extensive research has been done on the role of consultants in the adoption of new technology by firms, the vendor of these new technologies are hardly mentioned in research considering consultants.

Swanson (2010) mentions the role of IT vendors as an important player next to consultants and Gable (2005) considers vendors as important impactors of consultant’s knowledge strategies. Wang & Ramiller (2009) mention the role of vendors in the diffusion of IT innovations and acknowledge that consultants follow up on vendors and make use of their information about IT innovations. Patterson & Dawes (1999) state consultants have extensive influence on the buying decision of the client and urge the importance for suppliers to “stay well-connected” with consultants to become part of the choice set and be considered in the buying process.
Gable (2005) and Wang & Ramiller (2009) did not further investigate how these two parties relate to each other. Although Gable (2005) mentions the vendor-consultant relationship, he does not explicate what it would look like and what it should be based on while the two are operating so closely to each other. Patterson & Dawes (1999) also describe the importance for the two parties to be connected and share knowledge but don’t describe how.

Since research has shown consultants are influencing the buying decisions of clients, they should be considered by vendors as an important party. Their influence on clients could either turn out positive or negative for the vendor and in what way would a vendor-consultant relationship influence this. Or even more ambitious, would it be possible to gain competitive advantage as a vendor from a vendor-consultant relationship? The literature on this topic confirms the importance for a solution of the research problem and can be an important source of information for Network Inc.

1.3. Research questions

Considering the research problem and research gap of the study, a research question is formulated as the fundamental question to be answered during the research.

Research Question: How can the establishment of a vendor-consultant relationship create competitive advantage for Network Inc.?

To give the research more structure, the research question is separated in four sub questions which will be explained shortly.

At first it is important to identify why a vendor-consultant relationship should be established and how it would benefit both parties. Therefore, an image should be created of the role of consultants in the market of Network Inc. and how the two parties relate to each other. The first sub-question is:

- Sub-question 1: What are the incentives for Network Inc. to establish a vendor-consultant relationship for both parties?

After creating an image of both parties, the fundamentals for the relationship should be identified. These fundamentals of exchange are what resemble the value of the relationship. Therefore, sub-question 2 is formulated.

- Sub-question 2: What is/are the fundament(s) of exchange the relationship between Network Inc. and consultants should be built on?

After identifying sub-question 1 and 2, we can describe the how the relationship can be established. This can be related to the practical case of Network Inc. which can illustrate the way in which such a relation could be implemented.

- Sub-question 3: How can Network Inc. establish a vendor-consultant relationship?

Eventually, after the relationship is established, it should be nurtured to remain beneficial for both parties. To be able to create an advice for Network Inc. how to nurture this relationship, sub-question 4 is formulated.

- Sub-question 4: How can Network Inc. maintain a vendor-consultant relationship?
The goal of this study will be to create a design as a solution to the problem of Network Inc. After the interviews, the results will be discussed. These results will be used to describe if a relationship is possible and on what grounds. After discussing the results, a solution can be made. This design will contain detailed implementation steps and examples how Network Inc. can solve its problems and how these steps will lead to the desired solutions. The solution will be specifically described for Network Inc. situation and further implications will be discussed in chapter 6.

2. Developments in IT-consultancy

In this chapter, the context of consultants will be discussed. To be able to get more into detail on the relationship between vendors and consultants, the context of both parties needs to be described. We will first discuss the scope of consulting in the Netherlands and follow with the scientific background of consultants.

2.1. Consulting in numbers.

The worldwide consulting market has a market scope of $250 billion of which approximately 20%, $46,8 billion, is focused on IT consulting. The global technology consulting market, of which IT advisory is part, has a forecasted growth of 2.4% (Consultancy.nl, 2015).

Zeenny & Kersten (2014) published a report on behalf of Consultancy.nl, a website specialized in the consultancy branch of the Netherlands and the UK, about the Dutch professional service sector. This gave insight into the following numbers:

- 1.428.005 service firms are active in the Netherlands, which has shown a steady growth of 5.4% over the period of 2007-2014.
- 21% of these enterprises are focused on Professional Services.
- IT Consulting market exist of 14.325 companies in 2014. This is approximately 5% of the total Professional Service industry.
- The IT Consultancy sector has shown a growth of 107,8% for the period 2007-2014.

In interviews with Network Inc. employees mentioned the rising number of freelance consultants in the market place. This is supported by the report of Consultancy.nl (2014). As can be seen in Table 1, the largest number of consultants are freelancers, about 11.915 registered as companies, and only a small number of employees is working for medium or large firms. Compared to the 5081 in 2007, this is a growth of 134,5%.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Breakdown by employee size (2014)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freelance (2-5 FTE)</td>
<td>83,2%</td>
</tr>
<tr>
<td></td>
<td>Boutique (2-5 FTE)</td>
<td>9,5%</td>
</tr>
<tr>
<td></td>
<td>Small (5-10 FTE)</td>
<td>3,1%</td>
</tr>
<tr>
<td></td>
<td>Medium (10-50 FTE)</td>
<td>3,5%</td>
</tr>
<tr>
<td></td>
<td>Large (50+ FTE)</td>
<td>0,77%</td>
</tr>
</tbody>
</table>

Table 1: Industry Breakdown 2014: IT consultancy (Zeenny & Kersten, 2014).

97% of the growth of enterprises in the professional service industry can be attributed to the rise of freelancers. Focusing on the IT consultancy market, a decline in large and medium sized companies of 26,6% (from 5,8% to 4,3% market share) between 2007 and 2014 can be found.
In total, there are 65,244 IT consultants (8% of the professional service market) which establish a revenue of $7.9 billion in 2014 with a total profit of 709 million.

These numbers give a perspective to the scale of this research though IT consultants is a broad definition as we are focused on IT consultants specialized in networking. The scale of this group is hard to find. In a report of CBS (2015), from the total investments in IT, only 9% was spend on networking in 2013 (Appendix 4: IT spending Netherlands). A LinkedIn search on several job titles concerning networking consultants showed approximately 3000-4000 results. Although these numbers are far from accurate, they give an indication on the number of consultants Network Inc. is dealing with.

2.2. Consulting definition.
Much has been written about consultancy in research literature. Consulting is broadly defined as a process of transferring expertise, knowledge, and/or skills from one party (the consultant) to another (the client) with the aim of providing help or solving problems (Jacobsen, et al., 2005). They are outside experts which have knowledge insiders don’t have (Fincham, et al., 2008). Essentially, consultancies act in different roles as supportive change agents across the process. Individually, they are typically specialized in their capabilities but collectively the work they are prepared to do may be pretty much everything that the client is not prepared or inclined to do (Swanson, 2010). IT consultants are considered as external sources of information that are active and play an important role in the decision making stages (Patterson & Dawes, 1999). They have specific technical knowledge and experience with the implementation of complex IT projects (Swanson, 2010).

According to Jacobsen et al. (2005), the need for consulting by firms is linked to three types of factors: (1) Sectoral changes that cause them to look for very specialized forms of expertise, (2) budgetary limitations that make contracting the most cost-effective means of obtaining this expertise and (3) political environments in which using consultants becomes a way of increasing legitimacy.

1) **Sectoral changes.** Since IT is often used as support for the firms’ day to day activities, sectoral changes can urge management to make changes to its existing IT infrastructure. Often, managers lack the expertise when investing in IT (Sturdy, 1997) and are used to select the most appropriate supplier and the right product configuration (Patterson & Dawes, 1999).

2) **Budgetary limitations.** Companies want to remain flexible and hire knowledge when needed. This has led to an increasing role for third parties, such as management and technical consultants (Berggren, et al., 2001).

3) **Legitimation.** Sturdy (1997) confirms managers tend to be portrayed as uncertain and/or insecure and thereby seek a sense of reassurance, control or order which is offered by consultants. Managers also make use of the socio-political skills of consultants, which can help to manage conflict which can occur between different groups within the company.

Another important aspect of consultants besides having the knowledge to help clients, is their independent view on the market. By using a consultant, a business can benefit from advice given by an impartial consultant who will make independent assessment of the requirements of the client and recommend the best solution available in the market (Thong, et al., 1994).

2.3. Role of the Consultant
Consultants are described as playing various roles in their relationships with clients and their approaches have been described as falling along a continuum of directiveness ranging from advisory to
perceptiveness, with a distinct trend toward consultants and their clients working in more mutual and collaborative ways (Jacobsen, et al., 2005)

According to Bessant (1995), there are several ways in which consultants can improve the operation of the innovation process. He describes four roles that consultants play:

1. Traditional role: direct transfer of specialized, expert knowledge.
2. Experience sharing: the consultant works between firms and carries experience and ideas from one location to the other.
3. Marriage broker: the consultant is the point of contact for the client through which to access a range of specialist services from, for instance, different vendors. The consultant needs an independent view to be able to have contact and select these different vendors in a credible way.
4. Helping users to articulate their needs in innovation. They help in identifying what the customer’s goals are and how they want to reach them.

Bessant (1995) argues that it is the diversity of the consultant role that enables them to act across a wide range of users.

Pozzebon & Pinsonneault (2012) use knowledge-related and power-related factors to distinguish three types of client-consultant relations (Table 2). In the dependency type, the consultant is the expert and holds ‘technical’ control over the assignment. In the autonomy type the consultant is seen as coach and extra pair of hands, here the client holds the responsibility over the assignment and results. In the cooperation type, the client and consultant are partners and share responsibility.

<table>
<thead>
<tr>
<th>Types</th>
<th>Roles (knowledge-related)</th>
<th>Control (power-related)</th>
<th>Examples (metaphors) from the literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependency</td>
<td>Consultants are experts, authorities; clients elect to play a more passive role, they are local ‘information providers’</td>
<td>Consultants often hold ‘technical’ control of a and responsibility for the results. Total outsourcing can be considered a typical governance modality</td>
<td>Expert (Schein, 1999; Lee, 2002); guru (Clark and Salaman, 1998); doctor (Llewellyn, 2002)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Clients assume an active role and see consultants as a coach, an extra ‘pair of hands’; consultants take a more passive role</td>
<td>Clients hold control over and responsibility for the results. Consultants are often engaged by meticulous and temporally well-defined contracts</td>
<td>Pair-of-hands (Schein, 1999); facilitator (Lundberg, 1994); coach (Bennett, 2001)</td>
</tr>
<tr>
<td>Cooperation</td>
<td>Consultants and clients play active roles; they aim to be partners</td>
<td>Clients and consultants share control and responsibility over the mandate and results. Partial outsourcing often emerges</td>
<td>Collaborative (Schein, 1999); interdependent (Williams)</td>
</tr>
</tbody>
</table>

Table 2: Three classic types of client-consultant relationship (Pozzebon & Pinsonneault, 2012)

Schein (1978) describes the consultant as either being a content expert or a process consultant. As a content expert, the consultant has all the knowledge and will solve the problem or perform the task. As a process consultant, the consultant will assist the client to solve the problem and is an expert in the way in which the problem will be solved. He is more concerned with the process of solving the problem than with the actual solution. When comparing these types to the description of Pozzebon &
Pinsonneault (2012), the content expert has most resemblance with the dependency types whereas the process consultant has most resemblance with the cooperation or autonomy types.

From these descriptions it becomes clear the role of the consultant depends on the client they will work with. For a large part this is influenced by the possible knowledge barriers between the client and consultant. These are the differences between the technical knowledge possessed by the consultant compared to the business knowledge possessed by the client. To overcome these barriers, knowledge has to be transmitted from the consultant to the client (Ko, et al., 2005). The size of these barriers can influence the role which the consultant will take in the project. Gable (2005) stated these barriers could result in an accessing strategy in which both parties accept that the service is produced and consumed with minimal knowledge transfer. The consultant will have more of a doctor-patient or lawyer-client relationship which corresponds to the dependency type of Pozzebon & Pinsonneault (2012).

Not only is the role of the consultant dependent on the existing knowledge of the client, the presence of the consultant will also influence the eagerness and motivation of the client to search for new information. According to (Dawes, et al., 2007), the participation of an external IT consultant has an effect on the external learning of employees. Dependent on the experience of the client, the external search effort of the client will decrease when an external consultant is present. Meaning, the client will be less motivated to search for information about the different products available in the market and other information that could affect its buying decision. The client will leave this search to the more experienced consultant whom will then be asked to share its knowledge.

For Network Inc. it is important to distinguish in what roles the consultants participate with their clients since this influences the type of knowledge the consultant shares and the possibility it has to influence the client’s final decision. In case of a dependency type of relationship, the consultant will have more influence on the decision compared to the autonomy type of relationship.

2.4. Types of consultants

Essentially, consultancies act in different roles as supportive change agents across the process. Individually, they are typically specialized in their capabilities but dependent on the stage in which they will participate, the role they play will differ (Swanson, 2010). Focusing on the IT sector, several types of IT consultants can be identified. The kinds of consultancy capabilities needed vary according to the stages of IT adoption. Some consultants will be active in the early stages and will be more focused on strategy whereas others will be active in the latest stages and focus on implementation and support.

According to Swanson & Ramiller (2004) the four stages of IT innovation adoption are comprehension, adoption, implementation and assimilation. These are the four stages a firm goes through when adopting a new IT innovation. At first the firm engages in comprehension through looking at other companies who have adopted the innovation and tries to “grasp the innovation’s meaning in specific local context” (Swanson & Ramiller, 2004). If the firm is convinced the innovation will be compelling for them, the firm will consider how to adopt the innovation. Are they ready for the adoption and what will the business case look like? If this phase is successfully undertaken, the firm will undertake implementation. In this phase the firm will carry out a project to acquire and deploy the technology, do the necessary training and initiate operation and use (Swanson, 2010). Finally, the firm will assimilate the innovation into its day to day work.
In many cases, consultants are asked to assist in these phases of IT adoption dependent on the existing knowledge within the firm. Since the kind of consultancy capabilities needed differ for all phases, Swanson (2010) differentiates 5 niches in which consultants contribute to innovation with IT by adding strategy formulation. Strategy formulation is the phase before a firm is even looking at a certain innovation. The firm considers its own strategy and possibly comes up with IT innovations that would fit their strategy. To visualize the life phases more easily, a lifecycle image is created as can be seen in Figure 4. Eventually, after assimilation and support, the firm will consider their strategy again and this might involve considering a new IT innovation.

The roles consultants play and how they contribute to the client in all life phases differs. Swanson (2010) named 5 niches which contain the 5 life phases. As can be seen in Appendix 5: Consulting Niches, some niche consultants are active in multiple life phases. Table 14: Consulting niches and contributions to innovation with IT. The consultants do not only contribute to the client, but also to the larger community which is engaged in the IT innovation (Swanson, 2010) which will be explained further in chapter 2.6.2.

Appendix 5: Table 14 explains what tasks are related to the phases of IT innovations that a consultant takes part in. So a strategy consultant has an important task in considering what innovations would suit a company and would fit their strategy. On the other end of the circle, the support consultant is focused on providing the service to maintain the innovation on the long-term whereas firm strategy seems unimportant. Since the contributions to the client are so different for the life phases the consultant is active in, Swanson (2010) states consultants possibly won’t be active in all stages of the process since each have their own expertise.
Network Inc. should question if they should communicate different information to different types of consultants and if some types might be more interesting to and interested in establishing a relationship.

2.5. Stages of consulting

The literature portrays consulting as a staged process, with specific tasks and functions taking place at different times (Fincham, 1999). Abbot (1988) describes the stages as diagnosis, inference and treatment. He links it to the knowledge of the consultant and is less focused on the client.

Jacobsen et al. (2005) did a study where they analyzed consulting literature and divided the consulting process in six stages: pre-entry, entry, diagnosis, intervention, exit and post-exit of which entry diagnosis, intervention and exit are similar to the stages of consulting often described in literature.

- Pre-entry: the context for the consulting project is set: a problem or issue emerges; the clients determine that they cannot address the problem, and they then decide to seek consultants and agree on which consultants to hire.
- Entry: consultants and clients define the central issues to be addressed and determine the scope of the consulting project. Consultants devise a research plan and work to develop or adapt an appropriate methodology for completing the investigation.
- Diagnosis: consultants usually assisted by their clients, gather and analyze data relevant to the central issue.
- Intervention: consultants and clients work together to interpret the results of these analyses and link them to the broader evidence base, using these activities to develop recommendations.
- Exit stage: consultants write and present their clients with a final report, a signal that the project has concluded.
- Post-exit stage: based on factors related to their own interests or the larger political environments in which they are embedded, the clients either do or do not implement the consultants’ recommendations.

![Figure 5: 6 stages of consulting (Jacobsen, et al., 2005)](image)

Although every consulting project goes through these stages, often there are no bright lines between them. In particular, the entry/diagnosis and intervention/exit stages may overlap.

2.6. Consultant’s Knowledge

As described in chapter 2.2, knowledge is one of the main assets of consultants. In this chapter we will get more into detail on the knowledge of consultants.

The competitive capability of professional service firms depends heavily on their ability to mobilize and synthesize professionalized bodies of expertise in order to create knowledge that satisfies client demands (Robertson, et al., 2003). Consultants can be seen as “knowledge brokers” between their client organizations and in the production of management knowledge (Werr & Stjernberg, 2003).
Consultant knowledge can be divided in different types of knowledge. Nonaka (1994) differentiates between articulate knowledge, in the form of methods, tools and cases, and tacit knowledge, in the form of consultants’ ingrained experience (Figure 6). Articulate knowledge is transmittable in formal, systematic language whereas tacit knowledge “indwells” in a comprehensive cognizance of the human mind and body (Nonaka, 1994). Articulate knowledge is often available to others and is more easily shared than tacit knowledge, which is more focused on experience of a consultant and is a more individual kind of knowledge (Werr & Stjernberg, 2003). Besides tacit and articulate knowledge, three knowledge elements were identified, (methods and tools, cases, and individual consultants’ experience), each representing knowledge of a different character (Werr & Stjernberg, 2003). Methods and tools represent general knowledge, like knowledge of the product portfolio of all networking vendors like Network Inc. and Cisco. Cases represent more specific knowledge since it considers, for instance, the application of networking products on small retail companies. Such cases are used as examples how the products could be implemented in such circumstances. Cases represent specific knowledge since they describe the approach used in one specific problem setting (Werr & Stjernberg, 2003). Experience is tacit knowledge since it’s focused on the personal experience of a consultant in a certain case.

When considering knowledge sharing, articulate knowledge is more easily shareable than tacit knowledge, since it involves a personal experience. Werr & Stjernberg (2003) therefore urge the importance of articulate knowledge, not as a replacement but an enabler of the exchange of tacit knowledge since it provides an organization with a common language. This common language will enable the identification, development and sharing of tacit knowledge in the form of cases and experiences. Although they focused on inter-firm communications and knowledge sharing, the importance of a common language will be argued in the next section as well.
The specific knowledge of the consultant can have different forms. It can be based on mastery of a certain technique, familiarity of new equipment or hardware or the skills of identifying client’s problems (Fincham, et al., 2008). It also includes knowledge about the vendors that offer a certain solution. Patterson & Dawes (1999) found that the amount of considered vendors grows when a consultant is involved. They state it’s therefore very important for a vendor to keep in close contact with consultants and share information with them about the vendor’s current portfolio. This will increase the chance of being considered as a suitable vendor for the client’s solution.

This is an important finding for this research since it states the importance of contact between vendors and consultants to increase consultant’s knowledge. Considering Network Inc. goal of improving its position in the market, being considered for implementation is the starting point of growing market share in comparison to Cisco which is the first consideration by many consultants.

### 2.6.1. Consultants and Knowledge Transfer

After discussing the type of knowledge consultants have, the way they acquire and share this knowledge is an important aspect of their job. Knowledge transfer is described as the process through which one unit is affected by the experience of the other (Argote & Ingram, 2000) and the recipient can learn and apply this knowledge (Ko, et al., 2005).

According to Fincham (1999), consultants do not only possess and share knowledge, they also create knowledge and they act as suppliers of ideas that enable managers to stay ahead of the game. They create practices and techniques from ideas to assure managers complex changes can be implemented. But to be able to create these practices and ideas, they need a basis of knowledge and keep their knowledge up-to-date. So it’s not only important to share knowledge with their clients, they also need to gain knowledge themselves from other sources.

In a later article, Fincham (2008) describes consultants as having specific knowledge called sectoral knowledge and describes consultants as “sector specialists” who accumulate knowledge of industrial sectors through repeated assignments with similar client firms. These assignments involve contacts with main industry players about their technologies and networks. Although he doesn’t mention exactly who these “main players” are, we can imagine vendors playing an important role since they provide the technology.

So, by helping clients and doing repeated assignments, consultants gain knowledge as well and they learn from the client’s situation. Both the client as well as the consultant learn from these assignments and from each other. Quinn & Rohrbaugh (1983) call this resource enrichment in which close collaboration and mutual support of all parties is needed to be able to deliver the best customized solution. The aim of resource enrichment is to extend and elaborate current capabilities which can be done by learning new skills or adding resources to the existing resource portfolio (Sirmon, et al., 2007). For consultants, this often involves in doing projects in which they can learn from others and from trying new implementations. According to Sirmon et al. (2007) resource enrichment is important for creating competitive advantage from knowledge and could therefore be important for consultants as well. Network Inc. could therefore play an important role in providing the consultants to expand its knowledge resources.
2.6.2. Innovation Community

Whereas Fincham (2008) described a network of contacts without specifying its players, Wang & Ramiller (2009) argue organizations learn about new IT from outside sources such as vendors, trading partners, consultancies, the media and universities. They are part of the same community in which community learning takes place as its members reflect upon their learning and contribute their experiences, observations, and insights to the community’s on-going discourse on the innovation (Wang & Ramiller, 2009). They consider vendors, adopters, consultants, research analysts and journalist as part of the community.

How does an IT innovation find its existence within such a community? According to Wang & Ramiller (2009), a single firm is mostly considered as the breading ground of the material instantiation of an IT innovation but the concept of the innovation starts beyond the boundaries of any particular firm. Swanson & Ramiller (2004) call this the “organizing vision” which they describe as a construction in discourse that emerges from a heterogeneous collective consisting of such parties as technology vendors, consultants, industry pundits, prospective adopters, business and trade journalists, and academics. It defines the innovation broadly and will eventually lead toward institutionalization of the innovation (Scott, 2000). The organizing vision is commonly recognizable by one or a few “buzzwords” that serve as a topical label for the wider community discourse (Swanson & Ramiller, 2004) and offers collectively constructed knowledge about benefits, costs, and implementation approaches (Wang & Ramiller, 2009). In some cases, when the amount of attention and popularity reaches an amount which is out of proportion to the benefits of actually using the IT innovation, it’s called a fashion. Abrahamson & Fairchild (1999) define a fashion as a relatively collective belief that a technique is at the forefront of rational management progress.

Whether the innovation leads to a fashion or not, the organizing vision can lead to the adoption and “taken-for-granted status or a collapse in credibility and eventual abandonment of the IT innovation (Swanson & Ramiller, 2004). So, although vendors play an important role in bringing new IT innovations to market, there are a lot of other parties, including consultancies that have an important role in the eventual adoption of an IT innovation.

Wang & Ramiller (2009) use the term “innovation community”. They define this community by using the description of a discourse community by Swales (1990); a collective with common goals and mechanisms of intercommunication among its members to provide information via a specialized common language which includes members with a suitable discoursal expertise. Within this community, Wang & Ramiller (2009) distinguish 2 ways of learning IT innovations; learning-about and learning-by-doing whereas learning-about will strengthen the articulate knowledge and learning-by-doing will strengthen the tacit knowledge. Learning-about is considered as making sense of the IT innovation without material engagement with the technology while learning-by-doing implies actually implementing the product physically. Learning-about is considered crucial in the diffusion and adoption of IT innovations. It is the means by which organizations tap into and make use of the knowledge embedded in the community discourse and decide whether to do or not to do an IT innovation (Wang & Ramiller, 2009).

The information that is spread in innovation communities can be divided in 3 types of knowledge (Wang & Ramiller, 2009):

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- Know-what: interpretations of the principles, features, or components of the innovation.
- Know-why: rationales for the adoption of the innovation.
- Know-how: strategies/capabilities for adopting, implementing, or assimilating the innovation.

Learning-about is considered as justifying the implementation of the IT innovation in the form of know-why and know-what knowledge and learning-by-doing will enable the implementation in the form of know-how knowledge.

After analyzing the knowledge contributions of different actors in the community during the life phases of the IT fashion, Wang & Ramiller (2009) concluded the contributions differ during those stages. The IT fashion went through the stages of emergence, growth, and maturity which correspond to the life phases of the product life cycle (Klepper, 1997) which also includes the decline phase. Wang & Ramiller (2009) used these stages to illustrate what parties communicated what information (Know-why, Know-what, Know-how) in what phase. Since the focus of this research is on the vendor and consultant, the activities of those parties are illustrated in Figure 7 by adding the data of Wang & Ramiller (2009) (Appendix 8: Data Wang & Ramiller (2009) to the lifecycle graph of Klepper (1997) in red.

Vendors contributed most knowledge in the emergence stage which mainly concerns know-why and know-what whereas consultants contribute more know-how during the growth and maturity and know-what and -why during the emergence phase. Know-how will come to prominence later in the discourse contributions of consultants as a consequence of the increasing level of engagement by adopters which they will help with implementation (Wang & Ramiller, 2009).

Consultants will be more interested in know-why and know-what in the early stages since they are more concerned with convincing managers the implementation is justified. In later stages they will be more interested in know-how since they will be more concerned with the actual implementation.
The knowledge spread of vendors and consultants follow-up on each other closely. Technology vendors will join the community discourse at a relatively early stage, with their contributions focusing heavily on the innovation’s know-what. Consultants will follow along behind the technology vendors in speaking to the innovation’s know-what and know-why and will shift to know-how eventually (Wang & Ramiller, 2009). For example, Swanson (2010) states consultants provide important know-how for replicable implementation. As already mentioned, in the case of ERP, in collaboration with vendors, they developed templates to facilitate the configuration process.

An important note by Wang & Ramiller (2009) is the fact that the heterogeneous organizations in an innovation community do not always interact with one another materially, but what they write and say about the innovation has the potential to range widely and affect other organizations that are geographically or socially distant. This implies no direct connection between firms is needed for them to influence each other or to reach each other with their knowledge. Consultants will search for knowledge in this discourse since it is that important to them. Consultancies arguably stake their reputations on those innovations they choose to support (Swanson, 2010) and to support an innovation, knowledge is needed.

Wang & Ramiller (2009) got their results from trade press articles but acknowledged other channels, like industry expositions, conferences, blogs and wikis, could be important in providing knowledge to the community discourse as well. Six main channel categories are distinguished by Payne & Frow (2005) including sales force considering sales personnel, outlets like stores and depots, telephony, direct marketing considering direct mail, radio and television (excluding e-commerce), E-commerce like e-mail and internet and m-commerce, including mobile telephony, short messages and mobile services like apps etc.

Network Inc. shares a lot of knowledge through channels that are accessible to a large community. These include the Network Inc. website, newsletters, social media like Twitter, LinkedIn and Facebook but also an online community called Superheads (pseudonym due to privacy). Superheads is an online forum on which anyone, from engineer working at partner firms to consultants, who has the urge to share or ask questions can. So Network Inc. does share a lot of information to the community discourse especially considering new innovations.

2.7. Conclusion: Network Inc.’s role in Consulting.

As mentioned in chapter 1.2, the literature that connects vendors with consultants is scarce but literature on consultants is not. In chapter 2 this literature is elaborated with a focus on Information Technology to illustrate the types of consultant, their role as opposed to their clients, the phases they go through and the way they deal with knowledge. In chapter 2.6.2 the innovation community is discussed which gives some explanation to a possible connection between vendors and consultants. Through these elaborations we can come to the following conclusions.

Consultant’s main asset is knowledge. They are consulted for their knowledge for a manifold of reasons and have different roles accordingly. Though their role also depends on the life phase of IT adoption that in which they are approached by the client. Also, the knowledge of the client has an effect on the way consultants operate. Although these are all clear assumptions from literature, they should be used with caution since not all sources are specifically focused on IT. As Sturdy (1997) mentions, it is well established that there can be a significant variation in consultancy projects, practices and styles and
client-consultancy relationships, both between client sectors and in particular, small specialist consulting firms and large transnational practices. Therefore, it is important to find confirmation of these assumptions in our analysis.

Considering the relationship between vendors and consultants, Wang & Ramiller (2009) identified the roles of both parties in the innovation community and how consultants learn and use the knowledge of the vendor. Patterson & Dawes (1999) go a step further and state the importance of information sharing from vendor to consultant. A link between the two parties would therefore make sense according to literature and confirms with the need as identified by Network Inc..

Literature lacks information about how the information should be shared between the two parties which makes three possible options for a relationship between vendors and consultants:

- A relation based on only direct interaction between vendors and consultants.
- A relation based on only indirect interaction through the innovation community.
- A relation based on both direct interactions between vendors and consultants and indirect interaction through the innovation community.

To find the best solution to our research problem, several topics from literature should be researched in the context of Network Inc.. Table 3 illustrates the most important subjects as derived from literature that will be used during the research.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Related Authors</th>
<th>Main questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Consulting</td>
<td>Jacobsen (2005); Patterson &amp; Dawes (1999)</td>
<td>Why are consultants hired by clients?</td>
</tr>
<tr>
<td>Roles of consultants</td>
<td>Schein (1978); Bessant (1995); Pozzebon &amp; Pinsonneault, (2012)</td>
<td>What role do consultants play and how does this differ for different clients and projects? How does this impact the decision of the client for a certain vendor?</td>
</tr>
<tr>
<td>Independency</td>
<td>Mclaghlin (1999); Bessant (1995)</td>
<td>How do they perceive their integrity and independency? Would this have an effect on the type of relationship that is possible between vendor and consultant?</td>
</tr>
<tr>
<td>Types of consultants</td>
<td>Swanson (2010)</td>
<td>Are the types of consultants as described by Swanson (2010) present in the Networking Sector? How does their relationship with and influence on the client differ? How does their knowledge and interest differ?</td>
</tr>
<tr>
<td>Stages of consulting</td>
<td>Jacobsen (2005)</td>
<td>Do the stages of consulting confirm the literature and what stages are most important?</td>
</tr>
<tr>
<td>Knowledge gathering</td>
<td>Werr &amp; Stjernberg (2003); Fincham (1999, 2008);</td>
<td>Where does the consultant get its knowledge from and how does this differ for the different types of consultants? What knowledge would they like to have and how is this affecting their advice to the client?</td>
</tr>
<tr>
<td>Knowledge sharing</td>
<td>Wang &amp; Ramiller (2009); Swanson &amp; Ramiller (2004)</td>
<td>Is there an innovation community? What channels are used by consultants and how actively? How do they perceive the participation of Network Inc. in this community?</td>
</tr>
</tbody>
</table>

Table 3: Important subjects as derived from literature.
Besides these topics it is important to identify how the current situation of Network Inc. is perceived by consultants to make sure the need for improved knowledge sharing is supported. By studying the above mentioned topics, the perspectives of both consultants as well as Network Inc. can be identified after which a solution can be found.

3. Research Methodology

In this chapter the research design will be explained which will be based on the gathered information and conclusions from chapter 2.

3.1. Case study research method

The goal of the study is to specify the ways in which a vendor-consultant relationship can be established and maintained. The research is of an exploratory nature to be able to develop concepts and establish priorities during the research. Since not much is known about this relationship from research literature, exploratory market research should gain insight into the players in the market and their incentives. Subsequently the focus can shift to establishing the relationship between these parties and eventually a research design, using CIMO-logic to create design parameters.

Case study research is an approach that investigates the phenomenon in question in its context. It is the most suitable research if the number of variables that needs to be considered is very large and if the phenomena and its antecedents cannot yet be clearly distinguished (Blumberg, et al., 2011) which is the case with the vendor-consultant relationship. By studying the phenomenon in a certain context, the current situation between the two parties and if and how a vendor-consultant relationship can be established, can be investigated. It also enables to establish a proposal to how a relationship can be created which can be used as an example and will possibly bring up new grounds for research.

To answer the research question considering a vendor-consultant relationship the grounds on which the relationship will be built on needed to be identified. This includes the way in which consultants work, what their projects look like and what their needs and unique selling points are which created a better understanding of how to match the consultant with the vendor and all issues that are involved. As described in chapter 2.7, there are a lot of variables that have effect on the way in which the consultant works. Not only the type of consultant but especially the type of project the consultant is involved in were therefore important to identify the incentives and fundamentals of exchange for a relationship. To identify these differences, different types of projects where researched. A multiple case study was used to compare cases of different consultants. The cases can be divided in 2 types of consultancy projects. The first type will concern a straightforward project where the technology that is eventually implemented is not innovative. The second project is a complex project where the technology that is eventually implemented is innovative. This difference is made for several reasons:

- To be able to compare all cases of the consultants, some sort of distinction makes it easier to identify patterns between the cases and prevent from invalid comparison. By comparing the topics, it enables for within-group similarities coupled with intergroup differences. The cross-case searching will enhance the probability for the investigators to find novel findings that may exist in the data (Eisenhardt, 1989).
• Wang & Ramiller (2009) based their research on innovations and discuss the difference in communications during the life-phases of the innovation (Figure 7). Since an innovation is at first considered innovative and in a later stage becomes institutionalized (Klepper, 1997), it’s interesting to see how these changes influence the way in which consultants work and what aspects differ per project. Whereas Wang & Ramiller (2009) describe vendor knowledge sharing is primarily the case in the emergence of an innovation, should a vendor-consultant relationship be based on innovative projects only?

• Network Inc. is a highly innovative company and is at the forefront of innovation for its market (chapter 1.1), which is one of the many ways in which they differentiate themselves from competitors. But their product portfolio also contains more institutionalized products. Considering their innovativeness and market position, knowledge sharing should be an important part of their marketing strategy but how is this perceived by the consultants and how does this communication differ for the different types of projects?

• As described by Swanson (2010), there are different consultant niches that are active in different phases from strategy to support. Whereas Swanson (2010) describes their activities, it will be interesting to see how their projects differ and if these niches can be identified in this context as well. Whereas Swanson (2010) described consultants focus on current innovations instead of yet-to-be-embraced innovations, how do they deal with innovative projects and do they match the conclusion of Swanson (2010)?

By identifying all these aspects an image can be created of the consultant in different situations. This is important to solve the research question since it will enable Network Inc. to differentiate between consultants establish a target group which will be most suitable to establish a relationship with. Possibly different consultants are interested in different fundaments of exchange or different ways of communications. By establishing an understanding of the way in which consultants work, this can be identified.

To qualify for the study, a short description was given which the cases that the consultants described should meet (Table 4). These indicators were discussed with pre-sales engineers from Network Inc. to make sure they enabled differentiation and matched the not-innovative versus innovative comparison. During the eventual interviews they were confirmed as being different in innovativeness by the consultants as well. Innovativeness is considered as the newness of the project and can be described along different dimensions. Garcia & Calantone (2002) describe newness to the firm, customer and industry. In our case the innovative projects are considered new to the industry, of which the consultant is part whereas the not-innovative projects contain hardly any newness to the industry.

<table>
<thead>
<tr>
<th>Not-innovative</th>
<th>Innovative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Wireless LAN implementation at a firm on only one location in a building with a simple structure.</td>
<td>A Wireless LAN implementation at a firm with multiple locations and add-ons considering either security software like Networks Access Control or Location-Based Services.</td>
</tr>
</tbody>
</table>

Table 4: Case description of Not-innovative and Innovative case

Next to the case comparison there were some other questions to identify more general topics like independency, use of communication channels and how consultants differentiated themselves from others.
3.2. Data Collection

Semi-structured interviews were held with consultants to get detailed case descriptions. Qualitative interviews are appropriate in studies where the goal is to obtain a solid account of what a respondent thinks about a specific phenomenon (Blumberg, et al., 2011). This is an important aspect to enable the consultants to, besides specifying the cases, also explicate their opinion on topics like vendors and independency. Semi-structured interviews were used to enable to ask additional questions and change the order of questions to keep the interview flowing. Since the possible difference in background of the consultants, the interviews needed the freedom for the consultant to clearly explain its context.

During the interview, a stage should be set on which the interviewee feels comfortable and is encouraged to describe their points of view (Kvale, 2007). To do this properly, the interview was guided through 7 stages as identified by Rubin & Rubin (1995). Further explanation can be found in Appendix 6.

An interview guide is a script that structures the interview and merely contain some topics to be covered or it can be a detailed sequence of carefully worded questions (Kvale, 2007). Although a checklist is most common in semi-structured interviews (Rubin & Rubin, 1995), due to the inexperience of the interviewer it was chosen to fully write out the questions.

To create the interview questions, a guideline was used following the approach of Kvale (2007). He differentiates between thematical and dynamical questions. Thematical questions are focused on producing knowledge. They are the questions the researcher wants to know but they are not always suitable to ask directly. Dynamical questions promote a more positive interaction and are less direct. Therefore, first a thematical guide (Appendix 7a: Thematical Interview Guide) was made with the questions that needed to be answered. This was used to create a dynamical guide which described the questions and is used in the interviews (Appendix 7b: Dynamical Interview Guide).

To create the thematical guide, the data analysis stage was taken into account, as Kvale (2007) describes as “pushing forward” and preparing for future stages. Therefore, the research questions were used as to create categories and sub-categories which could eventually lead to interview questions. These categories were used later in the data analysis. The interview guide was discussed with the Network Inc. manager and some employees and some adjustments were made to result in the final version.

The consultants for the interviews were selected based on several criteria; they needed to be active in the networking industry and be familiar and experienced with both kinds of projects. When in doubt, the consultants were therefore notified about the distinction in projects that would be made in the interviews on forehand. Preferably, there would be a good variance over the types of consultants as identified by Swanson (2010) to make sure both strategy consultants as well as engineering focused consultants were interviewed.

To approach the consultants at first the connections from Network Inc. employees were used to get in contact with consultants. This enabled to identify the type of consultants on forehand and get in contact with consultants more easily. Besides these connections, internet search pages and company specific search engine Finthem were used to identify consulting companies to approach. Eventually only 2 out of the 12 interviewees were found through this route due to a low response rate. Ten interviewees were

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1 Finthem is an online company search tool which finds companies on relevance of search words and relevance of similar companies.
employees at a company of which 7 different companies and 2 were freelance consultants. 3 out of 12
interviewees were not active consultants any more but active in a consultant company in a different
function in which they were still closely related to consulting operations. Table 5 illustrates the roles of
all interviewees and in which phase they were active.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Company</th>
<th>Job Description</th>
<th>Strategy Formulation</th>
<th>Comprehension</th>
<th>Adoption</th>
<th>Implementation</th>
<th>Support</th>
<th>Assimilation &amp; Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>Solution specialist</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2</td>
<td>A</td>
<td>Solution specialist</td>
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<tr>
<td>3</td>
<td>B</td>
<td>Network engineer</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>B</td>
<td>Junior network engineer</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>Network consultant</td>
<td></td>
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<td></td>
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<tr>
<td>6</td>
<td>C</td>
<td>Project manager/ICT consultant</td>
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<tr>
<td>7</td>
<td>D</td>
<td>Manager Consultancy</td>
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<tr>
<td>8</td>
<td>Freelance</td>
<td>ICT consultant</td>
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<tr>
<td>9</td>
<td>E</td>
<td>Account &amp; People manager</td>
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<tr>
<td>10</td>
<td>Freelance</td>
<td>Senior advisor &amp; project manager</td>
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<tr>
<td>11</td>
<td>F</td>
<td>Consultant</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>G</td>
<td>Branch manager</td>
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</tbody>
</table>

Table 5: List of interviewed consultants and their types as specified by Swanson (2010)

During the interviews the consultants were asked to describe the 2 types of cases: innovative and not-
innovative. They were asked to take a certain case in mind and describe it along a couple of topics.
These topics were first described in the interview guide. This strengthens the quality of the research
through standardization by applying the guide more or less consistently in each interview (Flick, 2007).
The topics that were used were derived from Table 3.

Alongside these topics questions were asked considering the independency of the consultant, the
communication channels they used and how they thought about the role of the vendor. The semi-
structured interviews enabled the interviewees to elaborate on topics they thought were important and
to adjust some of the questions to the type of consultant. This meant information was shared that was
not specifically targeted with the questions but was valuable. Since the consultants are asked to
describe cases, a qualitative interview is the best approach to get descriptions that match the indicators
as specified. To understand whether the consultants were interested in a relationship, it was important
to identify their opinions about Network Inc. and motives for their opinions. A qualitative interview was
therefore most suitable.

All interviewees were notified about the recordings and given the opportunity to review the transcribed
text and rectify parts, which none of the interviewees did.
3.3. Data Analysis

After recording, the semi-structured interviews were transcribed, reproduced as a written account using the actual words (Saunders, et al., 2009), to enable data analysis. According to Saunders et al. (2009), with an inductive approach the researcher starts to collect data and then explore them to see which themes or issues to follow up and concentrate on which fits well with the goal of the study.

All transcribed interviews were analyzed by using the approach described by Schmidt (2004). She brings different analytical techniques together that are suited to the analysis of semi-structured interviews in five phases:

**Stage 1: Material-oriented formation of analytical categories.** All topics and individual aspects that can be related to the context of the research questions were described and noted.

**Stage 2: assembly of the analytical categories into a guide for coding.** These topics were changed into categories which could be used for coding. These consisted, for instance, of the topics on which the comparison between the two cases could be made. When constructing the interview, these categories were already used so a coding guide was more easily made.

**Stage 3: Coding of the material.** All text was now coded using the coding guide, though new categories emerged since the semi-structured interviews enabled elaboration besides the questions asked. The coding program Nvivo was used to code all texts.

**Stage 4: Quantifying surveys of material.** All coded text was then combined in tables per category. Nvivo enabled to more easily cross-reference certain categories with each other. This cross-case searching forces the investigators to go beyond initial impressions and should enable in a theory with a closer fit to the data (Eisenhardt, 1989). The tables consisted of quotes from the text on a certain topic which taken together would enable to draw conclusions.

**Stage 5: Detailed case interpretations.** The tables were all analyzed and conclusions were written for the topics.

After analyzing the data, the conclusion was made not all topics were described for both situations by all interviewees. Therefore, phone interviews were conducted with 6 out of 12 of the interviewees to get some additional information. This data was transcribed and coded similar as the previous data and was added to the tables after which they could be interpreted with the rest of the data.

After all data was coded, conclusions could be drawn from the data. Not all topics that were questioned were mentioned frequently or consistently enough to draw conclusions from that could be generalized. In some cases, they were not specifically answered by the interviewee or asked for both types of cases by the interviewer. For some other topics, it was not possible to differentiate between the two cases. Either because they were not relevant to the two cases or they were not consistently mentioned only for both types of cases. Though some new topics were added while coding as well which were not part of the coding guide at first. The results will be discussed first for the topics that can be differentiated for the two cases and second for the rest of the topics.

Considering our design science approach, after analysis of the data and discussion of the results, a solution for the problem of Network Inc. will be created. The mission of design science is to develop knowledge to solve field problems and intends to add to analysis and explanation, specifications for
interventions to transform present practices and improve the effectiveness of organizations (Denyer, et al., 2008). To implement this solution, design parameters will be created with CIMO-logic. The logic can be explained as follows: in this class of problematic Contexts, use this Intervention type to invoke these generative Mechanism(s), to deliver these Outcome(s) (Denyer, et al., 2008). By creating these design parameters, it will be more clear how the solution can be implemented and lead to the desired results.

4. Results

This chapter will discuss the results from the semi-structured interviews. As mentioned in the previous chapter, all interviews were transcribed and coded. The coding results were then combined in tables to and conclusions could be drawn from the citations in these tables. In this chapter we will discuss these results and underpin them with the most important citations. The results will then be used to propose a solution for a vendor-consultant relationship corresponding to the case of Network Inc..

4.1 Interview Results

The IT lifecycle of Swanson (2010) was approved by all consultants and the overview of Table 5 shows most interviewed consultants are active in the first phases of the lifecycle. Consultant 1, 2, 3, 4 and 7 were more active in the assimilation & support phase. The results are based on interviews and most important citations that support the results can be found in Appendix 9A: Citations from interviews and Appendix 9B: Citations from Interviews on Communication. The descriptions of the non-innovative and

![Figure 8: Relations between project innovativeness and case topics.](image-url)
innovative case (Table 4) were confirmed by the consultants and results were found for the following topics. Table 16 and Table 17 presents the most important citations used to draw these conclusions. The relations between the innovativeness of the project and the different topics are illustrated in Figure 8. These are not significant correlations but an illustration of the relations found in the interviews. They should be interpreted as the following example: a project with high innovativeness had a longer stage duration and more iteration.

Advisory Process. Although both types of cases went through similar phases and confirmed the phases as described by Jacobsen, et al. (2005), as discussed in chapter 2.5, there were slight differences. The non-innovative cases spent less time at each phases while the innovative cases took more time and used iteration during the phases to identify what the real needs of the client were as illustrated by relation 1. Though this does not have to mean to total duration of the project was longer as well as no difference was identified between non-innovative and innovative cases. There are many influential factors like decision speed of management or financials that can affect the duration of the project so although stages might go faster, these factors can still slow down the total project duration.

A difference with the stages as described by Jacobsen, et al. (2005) is not all consultants end the project with a report. As became clear in the life phases in Table 5, some consultants are active in the assimilation and support phases as well, for them the process doesn’t stop after the report. In non-innovative cases it was mentioned the report can be very simple since the solution is kept as simple as possible. In innovative cases, the entry-stage was very important since the consultant has to find out what the client really wants. Mostly they started with specifying the solutions of the clients as described by consultant 3:

Consultant 3: “What has changed in your world that this solution is the one you want? Because maybe the result is not what you want at all! What is your real goal with this implementation?”

Client Knowledge about networking is much lower and their assessment of the complexity of the process is worse in the non-innovative cases compared to innovative cases as illustrated in relation 2. Though this doesn’t necessarily mean knowledge about networking is higher amongst the entire firm. The number of responsible people that a consultant came in touch with at the client was a variable that was not included in the interview at first but was found repeatedly. In non-innovative cases the consultant has contact with an IT manager or administrator although in most cases there is only one. In innovative cases, contact happens with multiple different actors from different departments and different layers of the company. This can range from management and finance to IT departments which makes it more difficult to recognize who’s responsible and brings more politics to the process (relation 3).

Consultant 10: “I try to move through the entire organization, take everyone’s opinions and get back to management. Many times they don’t know the demands from the mechanics differ from theirs and we reformulate the eventual strategy.”

The project description in non-innovative cases is very open. Most customers don’t really know what they want. According to consultant 1, a description given by a customers was:

Consultant 1: “We just want Wi-Fi, make it work”.
Many consultants mentioned quotes alike. In innovative cases, the project description is more diverse. In the case of consultants 2, 4, 8 and 11 the project was clearly described while in the case of consultants 5, 6 and 12 it was very open. When we consider the phases of the IT innovation in Figure 4, we can argue the not-innovative projects were in a later stage and therefore the project description was better defined than the innovative cases. In general, the consultants mention the client in innovative cases have a better idea what they want and what direction they want to go. They are more strategy focused and IT is often part of this strategy (relation 4).

The role of the consultant differed as well. In non-innovative cases the customer more often leaves the project to the consultant to complete and the consultant has an Expert role (Schein, 1978). The client is much more dependent upon the consultant, like the dependency role as described by Pozzebon & Pinsonneault (2012). The following citation shows the autonomy given to the consultant by the client.

Consultant 4: “Just make it work, we don’t really want to get involved”.

In the innovative cases, the consultant is hired as a real knowledge partner and has a more advisory and cooperating role. They are hired for their technical knowledge and ability to manage the project but are part of the project team. This corresponds with the process role as described by Schein (1978) and the collaborative role as described by Pozzebon & Pinsonneault (2012). Relation 5 illustrates the expert role of a consultant decreases (and becomes more of a process role) when the innovativeness increases. The knowledge of the consultant is sufficient in non-innovative projects and all consultants acknowledge these projects could be done on existing knowledge and experience. For the innovative projects, the consultant is challenged and more often needs additional knowledge to be successful (relation 6) as described by consultant 6. Experience is not sufficient since more innovative techniques are used which the consultants has no or hardly any experience with. Other characteristics of the project, like politics within the company, number of buildings, involved parties can make it more challenging as well.

Consultant 6: “At the start of the project, your knowledge is more often not sufficient. I think it’s not the right mentality to think your knowledge is sufficient, you always have to look for new information when starting a case”.

Vendor preference occurs less in not-innovative cases whereas a decision will be made more often on price. In innovative projects, technical features are more important (relation 7). The customer has more knowledge about vendors and their abilities. Though there are many other factors that affect vendor preference in both types of cases.

When we consider the last two relationships in Figure 8, a link to the vendor can be made. As mentioned by consultants, when projects become more innovative and product quality becomes more important, it’s more important for them to get new knowledge and to be able to find the best solution for their client and contact with a vendor to get project specific feedback becomes more important. In non-innovative cases, their knowledge is sufficient and project specific vendor contact is less needed which explains the relation 8. The choice for a vendor and the influence a consultant can have on the decision making of the client depends on several circumstances. Figure 9 illustrates all of these relationships.
Figure 5: Circumstances that influence the consultant's influence on the client decision.
At first, Consultants mentioned personal relationships that could have an effect on the decision as well as existing contracts. As consultant 9 stated:

**Consultant 9:** “This company had its global office in South Africa but decided to just work with Vendor A since top management decided so, then you just have to deal with it”.

These kind of relationships limit the influence of the consultant and difficult to change the mind of the client on such decisions. The installed base is an important factor for vendor preference as well, especially when, for instance, the existing infrastructure is extended with new equipment or software. Consultant 10 described how clients are not always eager for a multi-vendor infrastructure:

**Consultant 10:** “When a customer already has an existing infrastructure with vendor A and is happy with it, why would he want Vendor B and cope with the difficulties of having a multi-vendor infrastructure”

A second consultant stated:

**Consultant 7:** “If the IT-staff has experience and is skilled to use Vendor A products, why take on the hassle of training them to use Vendor B products while products specifications are almost similar”.

Having an installed base therefore has a negative effect on the influence of the consultant. The installed base also has a positive effect on the knowledge of the client. Client knowledge plays an important role since it influences several factors. When a client has more knowledge about networking and the solution that is needed to fulfill its solution, it is able to describe its needs more specifically which results in a more complex project description. Ultimately this results in the need for a customized solution whereas a less educated client is satisfied with a standard solution. Since a customized solution needs to fit with the company, a process/collaborative role of the consultant is expected and the consultant will be involved in the earlier stages of the IT adoption.

The number of involved parties has a direct effect on the process/collaborative role of the consultant. When there are more parties to take into account and the process and interests of all parties become more important, the consultant is expected to manage this.

When the client doesn’t need a complex solution but a standard solution is sufficient, whereas the client just wants a solution to its problem, the consultant has an expert/dependency role. The client has no interest to be involved in the process and the consultant has more autonomy. Therefore, the consultant can decide what vendor will be used but since he is involved in a later stage, the decision for a vendor might be already made.

Another important aspect of a standard versus customized solution is the importance of product quality and price. Price has a negative effect on the influence of the consultant since the consultant has less room for argumentation on the best solution. Product quality has a positive effect since the consultant has most knowledge about technical specifications and is able to educate the client on what solution would fit them best.
Eventually, all these factors will affect the influence a consultant can have on the client’s decision. When this increases, the consultant should be able to influence the vendor choice decision which could ultimately lead to better sales, in our case, for Network Inc.. Though the knowledge of the consultant about Network Inc. is really important. If the knowledge is not sufficient, the consultant won’t be able to influence the client towards choosing Network Inc.. They will more likely advice the client to choose for a different vendor of which they have more knowledge. This underlines the importance of knowledge sharing with consultants by the vendor.

Apart from the type of case, consultants stated they always asked the client to motivate its preferences for, for instance, a vendor. If the consultant had reasons to disagree, he would state them but the final decision is made by the client. In some cases, when the eventual assimilation of the project was done by the same company and they would disagree, they would not do the project or would shift the responsibility to the client. A failed project though, no matter whose responsibility is still bad for the consultant’s reputation and if possible, will be avoided at all times.

The not-innovative projects mostly concern companies with less knowledge since they have less IT-staff with low knowledge which make unclear project descriptions. The role of the consultant is therefore more dominant and the consultant uses primarily previous experience which is sufficient. Combined with the lower importance of product quality, contact with a vendor about these projects is less needed. When looking at the described cases, for a large part this is due to the fact that their core business doesn’t concern IT and they want networking products or wireless networks because, for instance, they want wireless internet for their employees and guests to use. As soon as the IT is used to enhance their core business, it most often gets more complicated.

In innovative cases, there are more responsible parties with higher knowledge. Although the project description differs for these cases, more thought has gone into it by the clients and at least some sort of strategy is clearly defined. It should be mentioned in some cases it will take some time and effort by the consultant to identify this strategy and match a possible solution. The role of the consultant is more cooperative and due to the high-innovativeness; its experience is not sufficient. Education in any form is mostly needed to enhance the consultant’s knowledge to be able to participate in the project successfully. Combined with a higher importance for product quality, vendor contact was more often used to get specific project based knowledge.

Apart from the case comparison some other results were found in the interviews as well. An important topic was communication. Since the research is focused on the vendor-consultant relationship, the current communication of the consultant with the vendor plays an important role. In the interviews different channels of communication occur and we found differences between project related communication and non-project related communication. The citations can be found in Appendix 9B: Citations from Interviews on Communication.

*Project related communication* mainly concerns questions about the current project. For example, product specifications, where the consultant wants to know details about a certain project and whether it would be the right product for that specific project. But it could also concern support questions when consultants came across problems during implementation. All consultants stated they valued the ability to have a direct contact at the vendor that they could reach for quick questions. 7 out of the 12 consultants already had the possibility to get in contact with someone at Network Inc. and other
vendors as well. They liked the fact that they could get project specific answers quickly. Mostly they had 1 or 2 contacts which they would call when needed and would direct them to the right person at the vendor to help them. Company A (Table 5) has a closer relationship with Network Inc.. They are closely connected and bring each other leads as well. The rest of the contacts were rather informal and were established through previous working experiences which some consultants considered as a disadvantage since those contacts could, for instance, change jobs and the contact with the vendor would be lost.

In the case of support projects, consultants also mentioned they could “issue a case”. Which means they send a message with a problem and a support help desk will answer. They were all satisfied on the quality of the answers and speed with which this happened for both Network Inc. and other vendors. Few consultants mentioned forums or social media on project specific problems as well, especially the forum of Cisco, but others mentioned those were less ideal to find and ask projects specific questions.

Non-project related communication concerns keeping the consultant’s knowledge up-to-date aside from its current projects. The consultant is interested in new visions and innovations in the market, new products from the vendor and use cases which consists of project examples. This either happened through face-to-face meetings or online channels.

Face-to-face meetings concerned so called tech-sessions, seminars or events. All consultants that work at a company mentioned tech-sessions were hosted by the company in which they invited speakers from a vendor or other source, which would tell them about a certain subject. Dependent on the speaker these were rated highly informative and the consultants choose per subject whether it’s interesting for them to participate. They did not appreciate when the session was hosted by sales people since they are interested in technical details and not in a sales pitch which is meant for clients.

Another option is when a vendor organizes events. These could range from large global events and fares to smaller locally hosted seminars. Global events can be hosted by vendors, like Cisco Live or Network Inc. Atmos, which could also entail other products aside from networking. Fares hosted by other parties in which vendor participate were also mentioned. Most of these events are not explicitly focused on consultants. Some do differentiate between clients and Partners.

Consultant 3: “These large events are all about maintaining your relations and meeting old colleagues, I really like them”.

Aside from global events and fares, vendors also organize smaller events like update sessions which are more focused on one subject and hosted more frequently. The consultants which participated in these events, which concerns 10 out of 12 consultants, stated they were satisfactory overall. They valued new product knowledge and company visions but also the possibility to talk to relations and meet vendor employees face-to-face. Events specifically focused on consultants were not mentioned but most consultants had no problems in joining partner events, as long as the content suited them.

Consultant 10: “Every month I have 1 or 2 seminars that I want to visit. That takes time and money since I can’t work at the same time but I think it’s worth it”.

Aside from face-to-face meetings, consultants also use online channels to keep their knowledge up-to-date and educate themselves. As mentioned before, forums are used by several consultants, specifically by the consultants that participated in assimilation & support (consultant 1 to 4) and the ones that
stated to be extensively involved with technical implementation (consultant 5 and 11). They appreciated the quality of knowledge on these forums and the possibility to read experiences of colleagues and how they solved certain problems. Other consultants didn’t use forums or were not aware of their existence. They simply don’t consider it useful enough to spend their precious hours on. This is supported by the preference of direct contact.

Different kinds of social media were used by the consultants. Twitter was most used and valued for its community of experts and links to interesting content. A lot of these links lead to blogs of other consultants or engineers which were found interesting.

Consultant 11: “Twitter has a really dedicated community of experts which is really interesting. I’m more a reader than a contributor but that might grow”.

LinkedIn was used by all consultants but primarily to maintain their contacts. Some mentioned they once in a while looked at updates by vendor contacts. Facebook wasn’t used by any of the consultants considering keeping their knowledge up-to-date. Although some mentioned they followed all new innovations through social media to stay up-to-date, others didn’t have the time or wanted to make the effort to go through social media in their spare-time. In many cases they already spent so much time on their jobs, they weren’t interested in more information in their spare time.

Another important and valued source of knowledge were certificates. These are official certificates issued by vendors or independent organizations which consider networking. It does not only educate the consultant but is also a way to differentiate yourself from other consultants since the certificates are linked to a certain level.

Consultant 5: “Since our primary value is knowledge, it’s important to being able to show you have this knowledge through certificates. It’s not just knowledge gathering but it also is a sort of status”.

Most mentioned certificates were Cisco certificates, which is not surprising considering their history and market share, but 2 consultants were Network Inc. certified as well. Since certifications are rather expensive to acquire and keep up-to-date, consultants will always consider whether it’s worth the investment. Consultants with more experience which are more concerned with the strategy phases attach less value to certificates since they are less concerned with the technical details of projects.

Table 6 & Table 7 give a visual summary of the communication channel results. We’ve differentiated between consultants more focused on strategy and consultants more focused on the technical implementation and support. It should be mentioned all technical consultants worked at companies which had relatively close relations with Network Inc. therefore they possibly make more use of Network Inc. certifications and forums but their more technical orientation does explain the results. The difference between vendor wide and Network Inc. specific use illustrates the lack of communication possibilities currently offered by Network Inc..
### Channel Usage: Vendor wide

<table>
<thead>
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<th>Hardly Used</th>
<th>Regularly Used</th>
<th>Often Used</th>
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<td><strong>Project Related</strong></td>
<td></td>
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<tr>
<td>Direct contact (phone, e-mail or filing a case)</td>
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<tr>
<td><strong>Non-Project Related</strong></td>
<td></td>
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<td>Certificates</td>
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<td>Events</td>
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<td>Tech sessions</td>
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<td>Social Media</td>
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<tr>
<td>Forums</td>
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</table>

Strategy Consultants = 
Technical Consultants =

*Table 6: General use of communication channel.*

### Channel Usage: Network Inc.

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<th>Hardly Used</th>
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Strategy Consultants = 
Technical Consultants =

*Table 7: Network Inc. Specific use of communication channels.*

From the results in Table 6 & Table 7 it can be concluded that support consultants can be targeted through different channels compared to strategy consultants. Support consultants make more use of different communication channels and seem to put more effort into finding information. This is an important finding since strategy consultants have a bigger chance of influencing the vendor choice due to the stage in which they participate.

One of the main concerns on forehand, considering the independency and integrity of consultants seems to be no issue when considering a relationship with a vendor. Consultant mentioned communication with a vendor won’t affect their independency since they consider themselves independent as long as they don’t sell products. The fact that they won’t financially benefit from choosing one vendor over the other makes them an independent party. They did mention some vendor
firms approached them for a relationship but in the end expected the consultants to start selling products, which was not appreciated by the consultants.

After discussing the results, it can be concluded both parties are open for a relationship between vendor and consultant in which knowledge sharing should be the main fundament of exchange. Before identifying a solution that fits the problem of Network Inc., the next chapter will discuss the causal relationships that occur when increasing knowledge sharing and how it could lead to benefits for both parties.

4.2 Intervention Mechanisms

In the previous chapter the need for increasing the knowledge of consultants about Network Inc. was explained as well as the current lack of knowledge sharing channels. In this chapter the mechanisms will be explained which should result in increased consultant knowledge.

Increased knowledge sharing has both effects for the vendor as well as the consultant. For the solution to be successful for Network Inc., it should result in certain benefits. As Figure 9 illustrates, increased consultant knowledge is important for increasing Network Inc. Sales. Though the consultant should benefit from the relationship as well, else he/she will probably not participate. First the benefits for the consultant will be discussed after which the benefits for the vendor will be added which will result in a framework.

Figure 10 illustrates the effect of expanding the knowledge sharing capabilities of Network Inc. from a consultant’s perspective.

When Network Inc. expands its’ knowledge sharing capabilities, it will be able to transfer more knowledge to the consultants (1). The increased knowledge of the consultant will have 2 benefits for the consultant. At first the consultant has a wider range of solutions to choose from (2). This is especially important in innovative projects where consultants are expected to solve high-level problems. A better knowledge of Network Inc. products will enable them to not only find the best solution for its client but also give the client the possibility to choose. As stated in the results, the consultant is not always involved in the decision for a vendor, so chances may be Network Inc. is the choosen vendor. In such situations an implementation will be much easier when the consultant has either more knowledge or its easier to get to knowledge (3). Due to the growing market share of Network Inc., this can become
important in the near future since in more projects Network Inc. products will be used. Their goal is to deliver the best solution to the client and as stated many times by the consultants themselves, Network Inc. is one of the parties that has the products to do so. Being able to get more knowledge, both project specific and general knowledge would enable the consultant to give a more diverse advice which could lead to a better solution for the client. When a client has a preference for a vendor, this could also be Network Inc. and a wider knowledge of these products is essential in those cases.

The benefits for the vendor can be linked to the effects from the consultants perspective. Considering the product quality and innovativeness of Network Inc., mentioned by employees, consultants and research bureaus like Gartner and IDC (Appendix 1 & Appendix 2), increased knowledge of the consultant about the Network Inc. portfolio should lead to a growth in the decisions to implement Network Inc.. Though, many factors can influence the outcome of increased knowledge sharing and this remains a plausible assumption. To describe and explain this and other possible effects, the framework in Figure 11 is created which describes the effects on the vendor, consultant and client. The framework is constructed as a causal loop diagram (Sterman, 2000). The arrows are indicating causal links and are given a polarity with a (+) or (-). A positive effect (+) should be read as: “an increase in knowledge sharing channels quality results in an increase in community knowledge” or “a decrease in knowledge sharing channels quality results in a decrease in community knowledge”. There are 6 feedback loops indicated by the circle arrows of which 4 are reinforcing and 2 are balancing.

The vendor can share knowledge through different channels and for different occasions. First there is direct contact (left-side). This is considered as project specific information which will be shared by the vendor when approached by the consultant. This increases the (project) specific knowledge of the consultant needed to succeed in a project. The second possibility is to share knowledge indirectly (right-side) through community channels. These can be open-channels accesible to anyone like the vendor webpage or closed-channels which have restricted access. There is no direct contact involved between the vendor and consultant. Some of these channels have the ability to share knowledge by other parties than the vendor like forums or social media. In open channels these can be anyone from other vendors to consultants or partners, in closed channels the parties will be more restricted. Though as enitiated by Wang & Ramiller (2009), a community gets more attractive as more knowledge is shared and the community is used more. This will increase the community popularity and positively affect the consultant engagement in the community. This has a positive effect on the generic knowledge of the consultant which, together with its specific knowledge forms the consultants combinatory knowledge as explained in the framework by Werr & Stjernberg (2003) in chapter 2.6. The consultant needs to invest time in engaging in a community which cost hours spend in projects and can have a negative effect on its earnings. Unless the consultant decides to increase its amount of working hours which might have other negative effects which are not considered here.

As illustrated in Figure 11, the increased knowledge of the consultant has two benefits; it will increase the consultants’ ability to differentiate between the products and services of vendors which results in an increased knowledge in potential solutions. It will also increase the knowledge about specific customer needs. This will result in a better match between the needs of the client and the eventual solution proposed by the consultant, increased satisfaction of the client and possibly number of leads and projects. As described in chapter 2.6, consultants learn during projects as well, so increase in the amount of future opportunities can result in increased knowledge as well. The increased knowledge of the consultant can have a negative influence on its community engagement.

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Figure 11: Knowledge sharing framework & effects for consultant and client
When the knowledge increases, community engagement is less needed to gain new knowledge. It depends on the willingness of the consultant to share its knowledge with the community instead of the need to find new knowledge. Through sharing knowledge with consultants, the vendor gains knowledge as well. Through direct contact, the vendor will get to know more about the projects consultants are doing while increased community popularity will increase the amount of participant data if the vendor manages the community itself. For instance, who uses the forum and what company they work for. The balancing loop at the top represents the cost of increasing the channel quality. Increasing the investment rate in these channels will cost resources and capital which will balance the rate of investment.

How do the communication channels as discussed in Table 6 & Table 7 fit the model? Table 8 shows what channels should primarily be used for direct communication and what channels should be part of the community. Although project related questions can be answered through all channels, consultants preferred direct contact through phone or e-mail contact and some used a forum as well. Benefit of a forum is you can get response from the entire community. In non-project related knowledge sharing, most channels are part of the community. Events and tech-sessions do require direct contact and are preferred by consultants to build relationships.

<table>
<thead>
<tr>
<th>Communication Channel</th>
<th>Direct Contact</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone/E-mail</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Forum</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Non-Project Related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forum</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Event</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Techsession</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Social Media</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Website</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Certificates</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*Table 8: Types of contact & communication channels*

Aside from the positive effect for the vendor due to enhanced knowledge of the consultant, a vendor could benefit from extensive knowledge sharing otherwise as well. The consultants will share knowledge with the vendor which can be useful. In project related contact, the vendor can gain information about the project. Since the vendor normally gets information about these projects through its partners or sales people, the consultant is much closer to the client and project related information could be more detailed and useful. In non-project related contact, the vendor can gain more general knowledge about the consultants. It can create a database with knowledge about consultants characteristics; what firm they work, are they Network Inc. certified, what conversations are they joining in forums etc. In events and tech-sessions, the consultants will ask specific questions and the vendor can gain knowledge about projects, current interests of the consultants, how they feel about Network Inc. products etc. The gathering of this data is illustrated with the orange lines in Figure 11 but how will this data be of value for the vendor?

To be able to manage this amount of data, research about Customer Relationship Management (CRM) programs can shed some light on a solution and will be discussed more elaborately in chapter 4.3. By using data to get more knowledge about consultants the vendor can specifically target consultants in
information sharing and pro-actively approach them with information. Whereas normally the consultant will approach the vendor for information, a pro-active approach from the vendor can be a way to influence the consultant as the vendor is not dependent on the motivation of the consultant to find new information. By creating a more personal interaction with the consultants, Network Inc. will be able to better assist consultants in their projects but also proactively approach consultants and consultancy firms with information that suits their current interest and eventually influence the consultant.

The framework as proposed in Figure 11 will require actions by the vendor which will be described in chapter 4.3.

4.3 Solution Implementation.

To be able to realize the results as illustrated in Figure 11, a strategy should be described for Network Inc. to be successful.

To be able to increase knowledge sharing with consultants they should first be targeted. At first we will formulate the target group. Considering Table 6 & Table 7, the use of communication channels of strategy consultants is lacking most. Since they are active in the stages of IT innovation adoption that consider vendor choice, they should be the primary target group. This is supported by our findings in Figure 9 which illustrate how the possibility to influence the client is bigger when there is a need for a customized solution. Considering the needed role, these cases will be done by a strategy focused consultant. This does not mean technology consultants should not be approached since they can influence the client as well but they are already more concerned with finding knowledge and using Network Inc. knowledge channels.

Finding consultants can happen through different channels. At first existing contacts should be used as well as the consultants that were used for this research. These groups will most likely cooperate more easily. For targeting companies, computer software like Finthem can be used to find new consulting companies. The most difficult target group are freelancers since they are not connected to a company or the wider network of that company. Though sources like LinkedIn Sales Navigator enable to search for freelancers directly.

The consultants in our research described consulting firms as having both technical as well as strategical oriented consultants. Mostly the strategic consultants started as technical consultant and had a technical background. These consultants are the more experienced consultants of the company and visit company events, after which they share the knowledge throughout the company.

To be able to manage all information, a database should be created to keep all information up-to-date, at one place and available for everyone. As mentioned in the previous chapter, a CRM tool is a good way to manage such a database. Although most CRM literature is focused on a supplier-client relationship, the term “customer” may have a very broad definition that includes, vendors, channel partners or virtually any group or individual that requires information from the organization (Bose, 2002).

CRM is defined as a management approach that seeks to create, develop, and enhance relationships with carefully targeted customers to maximise customer value, corporate profitability, and thus shareholder value (Payne & Frow, 2004). CRM involves acquisition, analysis and use of knowledge about customers in order to sell more goods or services and to do it more efficiently (Bose, 2002). In the case of consultants, the data will be used to share more knowledge about goods or services. Bose (2002)
describes CRM as using IT, mostly software, to gather data which can then be used to develop
information to create a more personal interaction with the customer through continuous analysis and
refinement. The database can therefore be used to both store consultant information and learn from
this information as well. This information can result in, for instance, better insights in channel usage by
consultants, their interest in certain topics, their questions and concerns about products.

The database should also be used to register what projects they are participating in. The project
information can contain the clients they work with, the type of project, the type of implementation etc.
This can contain important information about future opportunities and Network Inc. gets a closer look at
client needs. By linking these projects and consultants to companies, Network Inc. can judge what
company is doing what type of projects and differentiate between companies doing innovative projects
versus companies doing less-innovative projects. As mentioned before, the first will gain more in
extensive information sharing. Payne & Frow (2004) call this a “graduated account management
strategy” in which more important clients, or consultants in our case, will get more personal approach
compared to less important clients. By differentiating its attention the efforts of employees can focus
more on its most important customers.

Project information can be useful to sales employees as well. When they are assigned to a new
opportunity and find out what consultant is responsible for that project, the sales employee can
examine the database to find more information about the consultant. If the consultant is for instance
Network Inc. certified and has done previous projects with Network Inc., a different approach can be
used compared to a Cisco certified consultant that has never done any Network Inc. Projects. If there is
no information, the consultant can be added for future information sharing.

The database can be used to give structure to the communications from Network Inc. to the consultants.
As mentioned before, multiple channels exist with which different goals can be achieved. The results of
our research illustrate the need for a multichannel strategy that enables both personal contact as well as
the use of community channels. To be able to communicate the availability of different communication
channels and information sources to the consultants, a website should be created. This enables the
consultant to find all communication channels in one place which should increase awareness. In the case
of Network Inc., an online community website already exists, named Superheads. Superheads contains a
forum, product information, a blog page with articles, an international event agenda and contact
information. The current focus is on engineers like partners which makes most information and
discussions on the forum focused on technical details. Support contact is only available to engineers that
are currently active in an Network Inc. project, so not for consultants that are describing a strategy since
they did not make a decision for a vendor yet.

Swanson (2010) mentioned consultants construct their advice through using their experience and
previous cases. In our results, use cases were mentioned by consultants as a valuable source and are a
good way to communicate previous successful projects by Network Inc.. Although Network Inc. already
communicates some use cases, its often more directed at clients and real technical terms are hardly
used, where a consultant will be more interested in the technical details. Some whitepapers about
implemented solutions in which real implementations are shown could be valuable. Another way to
learn more about the implementation of Network Inc. projects is creating an online demo environment
in which consultants can imitate a real implementation and practice with the Network Inc. products.
Table 9 describes what features, that the website should ideally contain for consultants, are currently present in the Superheads forum.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Current Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact information for any consultants</td>
<td>❌</td>
</tr>
<tr>
<td>Forum</td>
<td>✓</td>
</tr>
<tr>
<td>Consultant specific information</td>
<td>❌</td>
</tr>
<tr>
<td>Product information &amp; technical backgrounds</td>
<td>✓</td>
</tr>
<tr>
<td>Free seminars &amp; trainings</td>
<td>❌</td>
</tr>
<tr>
<td>Social Media channel links</td>
<td>❌</td>
</tr>
<tr>
<td>Event agenda</td>
<td>✓ (only international)</td>
</tr>
<tr>
<td>Certificate information</td>
<td>✓</td>
</tr>
<tr>
<td>Use cases</td>
<td>❌</td>
</tr>
<tr>
<td>Demo-environment</td>
<td>❌</td>
</tr>
</tbody>
</table>

Table 9: Superheads availability of features for consultants

Besides the portal, events and techsessions are a popular way to inform both clients and partners in the networking industry. Our results show they are used by the consultants, especially techsessions, but in limited amount hosted by Network Inc.. Therefore this is an opportunity for improvement.

The goal of hosting an event for Network Inc. is twofold. The consultant can be educated and relationships can be nurtured or established. As mentioned in the results, the topics that will be discussed in the event will decide whether a consultant will participate or not. Therefore it is important to match these topics, taking the interest of the strategy & technical consultant into consideration. As mentioned, client cases and future strategic company wide goals are interesting for strategy consultants whereas support consultants are more focused on technical details.

Nurturing or establishing relationships during events is an important aspect why consultants visit. This is an opportunity to give project specific feedback and gain project specific knowledge. It’s also an opportunity to get into contact with new consultants and extent the database.

Techsessions are an opportunity to elaborate on a certain topic. These sessions are mostly focused on technical information in which the consultants will start a dialogue and question the presenter (mostly from the vendor). These are therefore more focused on support consultants.

To be able to make the website a success, a lot depends on the engagement of the employees. Payne & Frow (2004) state the implementation of CRM needs to be supported by both management and staff. Management needs to communicate with employees how to deal succesfully with a multichannel CRM and sales employees need to change the way they work. Although the changes for sales employees will be limited, since they are not primarilily focused on consultants, they do need to change some aspects of their daily work, especially considering data gathering.

So although a CRM approach seems like the most appropriate solution, there are some aspects that need to be taken into consideration when implementing CRM.
Employee engagement is crucial in CRM (Payne & Frow, 2005) (Malthouse, et al., 2013) (Rigby, et al., 2002) and to reach this, Network Inc. has to consider who will manage the website and is available for contact with the consultants. Network Inc. also needs to involve its sales, pre-sales and partner sales employees in the process of keeping the database up-to-date. CRM can fail when only a limited amount of employees are committed to the initiative (Payne & Frow, 2005) so communication to the employees is crucial. It should entail clear goals for the CRM project which can be measured. Responsibility that is formulated in the tasks of the employee will make it possible to evaluate them and make it an official part of the job description (Rogers, et al., 1994). This can lead to positive employee engagement on the long-term. Since it’s difficult to directly relate the CRM project to sales in our case study, goals like number of consultants in the database or success of events are more suitable on short term.

As stated by Bose (2002), a CRM implementation, alike other enterprise level projects, needs support of senior management to be successful. It requires skilled employees (Malthouse, et al., 2013) and a dedicated collaboration between different teams like marketing, finance and sales (Payne & Frow, 2004). Due to the complex structure of PC Enterprise, a company wide implementation of a CRM tool specific for consultants will be an enormous implementation. CRM implementations are very expensive and time consuming processes (Payne & Frow, 2005) and top management needs to be involved in making the investment. Considering the proof of added value to the company is scarce, such high investments are unrealistic. Making use of existing channels, like Superheads, will simplify this implementation although they should be adjusted and extended to be suitable and are more limited in their opportunities to use as a CRM tool.

4.4 Cimo-Logic

To make the implementation more tangible and actionable, design principles are formulated using CIMO-logic.

Considering the case of Network Inc. and the results from the interviews, a design science approach meets our goal of creating a fundament or example for a vendor-consultant relationship. The mission of design science is to develop knowledge to solve field problems and intends to add to analysis and explanation, specifications for interventions to transform present practices and improve the effectiveness of organizations (Denyer, et al., 2008). To explain the design proposition, CIMO-logic is used. The logic can be explained as follows: in this class of problematic Contexts, use this Intervention type to invoke these generative Mechanism(s), to deliver these Outcome(s) (Denyer, et al., 2008).

After describing the aspects for Context, Intervention, Mechanism and Outcome, they are transformed into design principles which ultimately can be used as an advice in the specific case of Network Inc.. It’s important to not interpret the interventions separately but as a total package. A separate interpretation could lead to not achieving the desired and described outcomes (Denyer, et al., 2008). An example of a design parameter considering our research is as follows:

“If Network Inc. wants to increase consultants advising Network Inc. Products (C) it should take initiatives to start a relationship (I) to increase knowledge sharing by both parties (M) and increase consultants knowledge about the innovativeness and advantages of Network Inc. Products (O)”.

Table 10 presents all design principles. They are based on previous results and discussion. Some of the design principles start with a similar context indicated by a letter, for instance 2a and 2b. The principles are divided according to the 5 most important topics as concluded from previous chapter:
1. Nurturing a long-term relationship
2. Employee engagement
3. Improving consultant specific knowledge
4. Improving consultant generic knowledge
5. Target group differentiation
6. Organizing events

<table>
<thead>
<tr>
<th>Context</th>
<th>Intervention</th>
<th>Mechanism</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a If Network Inc. wants to systematically nurture a long-term relationship with consultants</td>
<td>it should target consultants to create and sustain a database of consultants</td>
<td>To address consultants more frequently</td>
<td>And create a systematic knowledge stream to consultants.</td>
</tr>
<tr>
<td>1b It should assign specific responsibilities to employee(s) official tasks</td>
<td>So employee(s) can be judged on their efforts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 If Network Inc. wants to implement a CRM platform</td>
<td>It should educate employees about the importance and their responsibilities</td>
<td>To increase employee engagement</td>
<td>And create a CRM that is supported by the employees</td>
</tr>
<tr>
<td>3 If Network Inc. wants to improve specific knowledge of the consultant</td>
<td>It should create a central point of contact for consultants</td>
<td>So consultants can get in direct contact quickly</td>
<td>And are not dependent on personal relationships to get quick answers</td>
</tr>
<tr>
<td>4 If Network Inc. wants to improve generic knowledge of the consultant</td>
<td>It should create an online website with specific consultant content</td>
<td>So consultants can find all information in one place</td>
<td>And will be able to find customized information faster</td>
</tr>
<tr>
<td>5 If Network Inc. wants to address its target group with suitable knowledge</td>
<td>It should differentiate between strategy and technology consultants</td>
<td>To address them with different information and content</td>
<td>And create dedicated followers from both parties</td>
</tr>
<tr>
<td>6a If Network Inc. wants to launch its consultant program successfully</td>
<td>It should organize a launch event for consultants</td>
<td>To inform and convince consultants about (usefulness of) the program</td>
<td>And create a dedicated group of consultants to start with.</td>
</tr>
<tr>
<td>6b If Network Inc. wants to educate consultants and sustain relationships</td>
<td>It should organize events for consultants specifically</td>
<td>To increase their generic Network Inc. knowledge and exchange ideas</td>
<td>To improve the relationship value for both parties and increase consultant brand identification with Network Inc.</td>
</tr>
</tbody>
</table>

Table 10: Design Principles in CIMO-logic.
5. Design

As a solution for the research problem of Network Inc., an implementation design is made. The solution is made based on the design principles of previous chapter.

Step 1: Creating a project team

The first step is creating a team that is responsible for the program. This step is related to design principle 1b and 2 with the goal of assigning responsibilities and ownership to certain members of the team which should increase measurability of their efforts and employee engagement. The team should contain:

- Team manager: keeps track of responsibilities and continuity of the program.
- 2 contact employees: One employee for strategy content and one for technical content. They are also responsible for direct contact with the consultants. This will be further explained in step 3.

Step 2: Creating the database: finding & approaching consultants

At first, a database should be created which contains the consultants that need to be approached, as in line with design principle 1a. The current database is scarce and should be updated which can be started by adding consultants and firms that are approached for this research. To find consultants with which Network Inc. currently has no contact, two applications can be helpful:

- Finthem: This online tool enables Network Inc. to find consulting firms. It can search on keywords but can also identify companies that are similar to the ones already in the database.
- LinkedIn Sales Navigator: this is a paid extension of LinkedIn which enables Network Inc. to search for leads. These leads, or persons, can be refined according to parameters like company size, job title, market in which they are active and many more options. It’s also possible to look for people that are self-employed to target freelancers. The application can also be linked to Salesforce, the software currently used by Network Inc. to document all their deals and sales contacts.

After creating the database with contact information, the consultants should be approached. If e-mail addresses are available, a newsletter type introduction with links to Superheads are most suitable. If only phone numbers are available and there is a high quantity, an external company can be used to approach the consultants and inform them on the new program.

A last option is to use targeted advertising to increase the awareness of consultants. For example, on LinkedIn, there is the possibility to create a target group specific to their job title, industry, job function and company size which would enable to target consultants.

When approaching the consultants, it is important to communicate the added value for the consultants. Therefore, the content that will be available by participating in the program should be communicated and consultants should be linked directly to the program to evaluate for themselves.

Step 3: Customizing Superheads

As discussed in chapter 4.3, the Superheads website can be used to establish a portal where consultants can find all information in one place. This is in line with design principle 4. One of the main functions of the Superheads website is its forum which is mainly technical oriented. To offer specialized information for consultants a closed group can be established on the forum only accessible for consultants. Network
Inc. employees can manage who will access the group and what type of information will be shared. Although the rest of the forum will be accessible for the consultants as well, the closed group enables to share specific information that might not be publicly shared. It’s an opportunity to share trainings, access to demo-environments and invites for events.

Another important aspect of the closed group is the ability to share contact information of Network Inc. employees which consultants can use for direct contact, as suggested in design principle 3. The ability to get in contact with a Network Inc. employee is valued by the consultants to get project specific details but should be accessible for consultants that don’t have any contact with Network Inc. yet, as well. To enable the possibility for direct contact, Network Inc. should appoint 2 types of employees for this role; a pre-sales employee and a business oriented employee. This will cover the topics of interest for the consultant and will make sure their questions can be answered. Their responsibilities should be made part of their official task.

By attracting consultants to the Superheads webpage, the awareness of the content on the webpage will rise as well. When new content is added to the forum, an update in the form of a newsletter will be sent to the consultants to make sure they don’t miss out on updates. It will also save cost since the current webpage can be used and possibly improved instead of creating an entirely new portal which will cost much more resources and management of multiple platforms.

Whereas the closed group is the fundamental add-on to the Superheads website, some other improvements can be made to increase value for consultants. Table 9 shows the currently available features and how the webpage could be improved in the future.

Content

As proposed in design principle 5, Network Inc. should differentiate between technical and strategic consultants. For technical consultants, the forum already has a lot of added value. For strategic consultants, the content and discussions on the forum are less relevant. Therefore, especially for this target group, extra content should be created. This content should have a strategic focus. Interviewed consultants asked for use cases in which will be explained how an implementation of new technology took place. Future strategy and market vision are interesting topics as well. The Network Inc. website currently already has a case study page and a whitepaper page with relevant strategic information. Though this is focused on clients instead of consultants and may therefore be not detailed enough. International cases are discussed but for our target group, local case studies about the local market are possibly most interesting. Therefore, the BU in the Netherlands should write more local articles as well. These could be written by all employees and could be focused on industries or new innovations. For instance, sales people that are focused on the healthcare industry can write their vision on the future of this industry and how Network Inc. is involved.

Another source for content creation can be independent parties that are not directly connected to Network Inc. but do write about topics relevant to the networking industry. Using independent writers improves credibility but cost more effort or resources.

Step 4: Organizing Events

Events have value for both consultants as well as Network Inc. to establish and nurture a relationship on a personal basis. 2 types of events will add value to this solution as proposed by design principle 6a and 6b.
At first, a launch event should be organized. This launch event is specifically focused on consultants with the goal to introduce them to the new approach of Network Inc. considering consultants. The event should show how Network Inc. takes the consultants seriously and appreciates them as an important party. During the event the added value of Superheads and the closed group can be explained and the contact employees can be introduced. The future goals of Network Inc. and future improvements of Superheads can be explained. Other topics should be an introduction of the future vision and strategy of Network Inc., their product line, and a use case. The topics of the event should suit both technical and strategy focused consultants and possibly the group can be split up in two groups to be able to go more in to depth about topics suitable for either party.

To make sure the attendance is high enough, the topics should not only include introductory presentations but also topics that are new to the consultants or unique for Network Inc.. An interesting speaker that is well known in the community could be a good motivator for consultants to attend the event.

Aside from the launch event, Network Inc. should organize events on a regular basis. At first these events can be combined with the quarterly partner updates that Network Inc. already organizes for its partners. Since the content of these events matches the consultant’s interest well, it is a possibility to minimize cost and resources. In the interviews, the consultants stated having no issues in participating in these events. The events should differentiate between technology focused topics and strategy focused topics as well. Currently, the partner events consider both topics but are more technically focused. A possibility would be to split the group so a technical presentation and strategical presentation can be held.

Cost of design
As illustrated in chapter 4.2, the improvement of knowledge sharing quality will cost capital or resources. Since the design is based on existing infrastructure, the initial investment costs are reduced which will increase the support of management. The needed resources for this design are stated in Table 11: implementation cost.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Hours spend</th>
<th>Cost (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finthem</td>
<td></td>
<td>€100-500</td>
</tr>
<tr>
<td>LinkedIn Sales Navigator</td>
<td></td>
<td>€600 (1 person)</td>
</tr>
<tr>
<td>Contact employee</td>
<td>4h/month (4000€/M)</td>
<td>€400</td>
</tr>
<tr>
<td>Superheads group administrator</td>
<td>2h/month</td>
<td>€200</td>
</tr>
<tr>
<td>Event planning</td>
<td>10h</td>
<td>€1000</td>
</tr>
<tr>
<td>Event cost</td>
<td></td>
<td>€7000</td>
</tr>
<tr>
<td>Speaker</td>
<td></td>
<td>€4000 – 10.000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>€6379,97 – 13.000</strong></td>
</tr>
</tbody>
</table>

Table 11: implementation cost.

Implementation of the design
When the described steps are followed, Network Inc. will have the basic fundaments on which they can grow their relationships with consultants. These steps are a starting point with which Network Inc. can use existing infrastructure and limited resources to start a program for consultants which could eventually grow. The implementation of these steps are a challenge already but are essential to prove the added value of the program and make way for future investments. Since the steps won’t include the
design of a new website or other time consuming processes, the implementation can take place in a couple of months. To organize the first launch event within 6 months after the start with step 1 should be a realistic goal.

When the program is successful and proves its added value to Network Inc. and the number of engaged consultants grows, it can be expanded. Network Inc. could, for instance, invest in a portal which is more advanced than the Superheads forum and enables more CRM features. This could lead to an eventual “knowledge partner program” which is comparable to the existing “partner program”. It can also be interesting to host events for consultants only instead of combining them with partner events and be able to communicate more specific information. A fifth step can therefore be added which is to evaluate the program success and formulate the future strategy. Figure 12 illustrates the steps that need to be taken to implement the design.

---

**Figure 12: Implementation steps.**

<table>
<thead>
<tr>
<th>Step 1: Create a project team</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a: assign 1 Team Manager</td>
</tr>
<tr>
<td>1b: assign 2 contact employees: 1 technical and 1 strategical</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2: Create a database with consultant information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a: Finding Consultants</td>
</tr>
<tr>
<td>2b: Approaching Consultants</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3: Customize the Superheads forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>3a: Create a closed group</td>
</tr>
<tr>
<td>3b: Create and share specific content</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4: Organize Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>4a: Organize a Launch Event</td>
</tr>
<tr>
<td>4b: Invite consultants to partner events</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5: Evaluate Program success and formulate future strategy for the program</th>
</tr>
</thead>
</table>

---
The success of the program depends largely on the engagement of the employees, especially of the employees responsible for the database and direct contact. It can only be successful if the ownership of the program is adopted by the employees and they are recognized for putting time and effort into the program.

6. Discussion

Due to the lack of research on this specific relationship, the study of Network Inc. illustrates an example of how a vendor-consultant relationship can be established. This chapter will explain the results of this research in the wider theoretical and practical field. But first the research itself will be discussed.

In chapter 1.3 the research questions of this research were formulated which questioned how Network Inc. could establish a competitive advantage from a relationship with consultants. This research answers the research question not entirely. Since a limited amount of literature is available about the relationship between vendor and consultant, this research mainly focused on finding the fundamentals on which this relationship should be built and how these two parties could both benefit from such a relationship. Considering the limited amount of time to execute this research, it was not possible to both describe a design for the relationship and test this design as well. Therefore, the focus was on the description of the design and analyzing the situation of Network Inc. in detail to come up with a design which would have a plausible positive effect for both parties. Although this research successfully described such a design, this does not fully answer the research question as there is no proof of actual competitive advantage for Network Inc.. The value of this research should therefore be more focused on how a company can establish a relationship with a new type of target group than the actual competitive results it can achieve with it. The design is tailored to the lack of knowledge about competitive results as well which enables the possibility to invest in a project based on plausible results in a company purely focused on quarterly results for their stockholders.

The goal, as described in chapter 1.3, to design an implementation and formulate steps which can be applied by Network Inc. was achieved although it was specifically described for one national business unit. The design steps can be realistically applied and fit the current situation of the company, which is an important aspect for actual realization. The design also matches the proposed design principles as described in chapter 4.4. Though realizing the outcomes of design parameters 4 and 5 will involve some challenges. Using a forum as a platform to share more knowledge, with limited CRM capabilities, might not be the ideal solution. Considering a forum is more focused on interaction whereas a portal is more focused on information sharing, the outcome which was strived for, of all information in one place, might not be fully reached. Though it is the most realistic solution which can be implemented fast with low expenditures. As many failures in CRM are described in literature, a minimized version might be a good stepping stone for future investment. The forum does enable consultants to find most information in one place and to more easily get in contact with Network Inc. which covers the design principle partly.

Considering design parameter 5, the creation of specific content, especially for strategic consultants, will be a challenge as well. Although creating content will be difficult for the Network Inc. Business Unit since they are not used to doing this, the realization that there are different types of consultants is already a step forward. The awareness will enable employees to identify the type of consultant and the way in which they should approach them, with what information or if a colleague would be more
suitable to approach them. Eventually this can lead to a more tailored approach of the different types of consultants and the desired outcome.

This research is written in approximately 6 months which forced the researcher to make choices in data collection due to time restrictions. One of these choices was to interview consultants only whereas clients would have been interesting as well. Clients play an important role and can shed light on why they choose for a certain consultant and how their choice for a vendor is affected by the consultant. Our research suggested a variety of reasons for the client to choose for a certain vendor and the influence of the consultant on this decision is important. Though the influence of the consultant on the client is a research subject on its own. The described reasons by clients were supported by employees from Network Inc. as well which supports found results.

The sample size of interviewed consultants was relatively small though for the exploratory nature of the research it was sufficient. The difficulty in reaching IT consultants that were willing to do a face-to-face interview from different companies, limited the sample size to the ones that had some sort of relationship to Network Inc. employees. Although this might have had influence on the Network Inc. specific knowledge, the need for a relationship is justified by them. It can be argued whether consultants that have less current connection with Network Inc. would be more or less eager for information but considering the growing market share and importance of Network Inc., the interest can be assumed to grow in future years.

Due to the lack of literature specifically focused on the relationship between vendor and consultant, the research has an exploratory nature with a design science conclusion in the form of design principles and an implementation design. Although there are several limitations which affect the outcome of this research it is a starting point for future research on this topic. The implications that come along with the design of our research and proposals for future research are discussed in the following topics.

6.1. Practical implications
When considering Network Inc. specifically, there are some practical implications that come along with the design.

The ownership and main responsibility is an important implication for success of the design. Previously some efforts were made to establish relationships, though they were unsuccessful due to a lack of consistency and ownership. Therefore, the first task of the BU manager should be to appoint ownership to an employee that has both the capabilities as well as the time to run the program.

Since the design makes use of existing resources, the investments in for instance new employees or new software are minimized. Though the new responsibilities for some employees that come along with our design means new tasks will be added to their task description. While at first the hours spend on the design are limited, when the program becomes more successful, the workload will increase. Managers should therefore take into account how much more tasks can be directed to an employee and whether this will limit the growth of the program.

The design also entails close collaboration with marketing. The marketing department is responsible for most of the content on Superheads and adding new content for a new target group means some adjustments need to be made. Whereas the sales employees will be involved in writing blogs, in which they are not experienced, they need to be supported by marketing as well.
This is not the only change for the employees of the Network Inc. BU. The acquisition of new consultants will also involve their cooperation. When engaged with a client, they should identify the consultant that is involved so he can be added to the database. But they can also benefit from the relationships. At events and other instances in which they get in contact with consultants, they can acquire project information which could result in possible leads.

To successfully achieve these changes, employee engagement is important. Therefore, a manager should urge the importance of the program and why and how these changes will positively affect these changes. Commitment by the business unit manager is therefore very important and the manager should be closely involved in the program in the beginning stages.

Although the resources to be spend are limited, the BU manager should be able to justify its expenses. Therefore, it is important to be able measure success of the program but for relationships this can be difficult. Whereas partner’s success can be measured in turnover, a consultant relationship differs. Even if the sales would increase because consultants are proposing more Network Inc. solutions to their clients, it remains hard to measure whether this is the reason for the sales to rise. In CRM the success is often measured in the form of customer happiness with the product but the consultant is not the end user. When assuming reaching a large target group of consultants will lead to increased sales, these numbers can be used as measurement of success. This assumption can only be made if the vendor is convinced of the quality and competitiveness of its products, like Network Inc.. If not, increased knowledge by the consultant can have a negative effect. Though an increased number of consultants that are subscribing to gain knowledge could mean the urge for knowledge about the vendor is increasing which is a positive sign for the vendor as well. Another option is to measure success by consultant happiness about the knowledge sharing possibilities. Whereas our results show the current knowledge sharing capabilities are not sufficient, the consultants’ happiness can be measured to judge whether the knowledge sharing capabilities are increasing.

When considering practical implications in general, our design is focused on a solution for Network Inc.. Whereas they have resources that can be used, this won’t be the case for any company that is looking to establish consultant relationships. Though it does give an example of how it can be established on a small scale. When a company has no existing resources, it should first address what channels it should use to address consultants in their specific case before investing in expensive portals or CRM tools. The framework in Figure 11 can help in understanding the effects and types of knowledge to share in any company.

6.2. Theoretical contributions and implications
The literature on consultants is extensive but mainly focused on the consultant-client relationship. Vendor literature is even more extensive but related to this subject, most literature focuses on the vendor-client and vendor-alliance partner relationships. A vendor-consultant relationship is hardly mentioned and this research sheds light on this topic by combining literature about consultants with the study on Network Inc.. The results are used to create a framework and to clarify how a vendor-consultant relationship can be useful to both vendor and consultant.

The need for a relationship or communication between consultants and vendors can be argued. In alliance literature for example, Gulati (1998) urges only to commit a relationship when needed and prevent if possible since it takes a lot of effort and dedication. As the effect of vendor strategy on
consultant’s strategy was mentioned by Fincham (2008) and shown by Gable (2005) a relationship becomes more logical. Wang & Ramiller (2009) show the closeness of the two parties in contributing to the discourse community which was used as a fundament for knowledge sharing between the two parties in this research and extends the literature by researching grounds for a relationship. This research shows the urge for a relationship comes from both sides and relationships between consultants and vendors already exist, though informal and on an irregular base. Though both parties acknowledge a more regular, systematically organized relationship could be beneficial for both parties. This justifies research on a vendor-consultant relationship.

Aside from the need and channels for vendor-consultant relationship, this research proposes a framework to explain benefits for both parties. The framework is based on the results of this research. It illustrates how a vendor-consultant relationship can be based on both specific as well as generic knowledge sharing. Whereas Werr & Stjernberg (2003) describes these types of consultant knowledge to illustrate sharing between consultants, this framework illustrates how a vendor can use this differentiation in knowledge sharing to consultants as well.

The types of consultants, as mentioned by Swanson (2010) are extensively described and used to differentiate between the interviewed consultants. The types and activities were supported by the results of this research although most consultants were active in several phases. In the case of Network Inc., a clear differentiation between the 2 ends of the spectrum could be made by comparing strategy consultants with technical consultants. By combining these types of consultants with the channels they use to acquire new knowledge and the project phases they are active in, a differentiation could be made between the type of knowledge and channels that a vendor should use to approach these consultants. This clarifies how the different types of consultants can be approached differently and how segmentation can be applied on this target group.

The life phases of an IT innovation and knowledge sharing of consultants and vendor are discussed in chapter 2.6.2 and Figure 4 illustrates the levels and types of knowledge sharing for every phase. Since in the early stage more knowledge sharing happens by the vendor and consultant and less in the later stages, it is assumed a consultant has more need for a vendor-consultant relationship in early stages of the IT innovation process or innovative projects. This research confirms this by showing there is more need for a relationship in innovative projects compared to non-innovative projects. For building a relationship with consultants, this can be an important aspect since consultants are interested in information about new innovations and a firm with only incremental innovations will have a harder time attracting attention from consultants since that knowledge is already present or easily understandable.

Wang & Ramiller (2009) showed most “Know-how” was communicated by the consultants whereas vendors played a minor role. The results of this research showed the eagerness of consultants on more case specific information and the ability to try an implementation through a demo-environment. This shows the willingness of consultants for more know-how and it could therefore be questioned whether the situation, as illustrated by Wang & Ramiller (2009) should be changed by the vendor. As Wang & Ramiller (2009) stated, learning-about has an important role in learning about an innovation. This could strengthen the argument for a vendor-consultant relationship in which the vendor communicates not only know-why and know-what but also more know-how, which could lead to a faster IT understanding by consultants and IT acceptance which could lead to faster implementation in the market and eventually a competitive advantage.
This research adds to the topic of consultant independency as well. The independency of consultants is not a widely mentioned topic. Although Bessant (1995) argues it's important for a consultant to be independent to be able to offer its client an opinion on the best possible solutions. Our research adds to literature here stating a vendor-consultant relationship is not harmful to the independency of the consultant. The consultants stated unanimously it's the fact they don’t sell any products or have financial benefits to choosing the implementation of one vendor compared to another that makes them independent. This puts boundaries to the vendor-consultant relationship, since for instance financial rewards cannot be used to influence them, considering the fact a vendor would want to enter this grey area at all. On the other hand, it opens doors to a closer relationship between a vendor and consultant than assumed on forehand. As long as financial benefits between these parties are not used, a closer form of relationship could be possible where for instance consultant and vendor bring leads to each other. It can be questioned if any other form of benefits would be accepted and how far a vendor can go.

6.3. Future Research

As becomes clear in the discussion and implications, more research is needed about the topic. Not only should the proposed design be tested, more detailed research can improve the design parameters as well and describe more specific solutions.

By using the case study of Network Inc., the research is strongly connected to the IT industry. For instance, the partners in the sales channel play an important role as Network Inc. already has a strong relationship with them which provides multiple communication channels to be used. The cases as described by the consultants are closely related to the networking industry. Other branches in the IT industry have similar sales channels and some of the companies in this research were active in sectors like cloud computing and datacenters as well though future research could focus on a wider sector. For firms like PC Enterprise which are active in networking, storage and cloud computing it would be beneficial to spread it’s CRM over all its activities.

The exploratory nature of the research was based on the lack of literature concerning the topic and made qualitative research in the form of semi-structure interviews a good way to figure out a broad range of information between vendors and consultants. A lot of the results would have been hard to accomplish in, for instance, quantitative research. Though, the semi-structured interviews have their limitations and so do some of the results. Building on our results, the channel usage of consultants, linked to their niche as indicated by Swanson (2010) should be investigated in a quantitative way. For instance, the low usage of social media can be questioned and quantitative research would enable a larger sample size and therefore more reliable results. It would also enable to investigate all niches of Swanson (2010) which would enlarge the segmentation options and narrow down the focus of the vendor.

A quantitative study should also entail a better spread amongst freelance consultants versus consultants working in a company and even a differentiation between small and large organizations. As described in chapter 2.1, the number of freelancers is growing which makes them an important target group for vendors. The fact that they have no colleagues or company information to fall back on could mean they have more to gain in a vendor-consultant relationship. In our research only 2 out of 12 consultants were freelancers, and although their results largely matched the results of the other consultants a real
differentiation is more reliable with a larger sample size. Future research could shed light on the importance of this group.

This study proposed an implementation design and framework to build a consultant relationship, though it was not possible to test them. The implementation of the design should be tested in a longitudinal study since it is assumed the effects can only be tested over a longer period of time.

When considering the consulting literature, which is extensively used in this research, most research and results are based on interviews with clients and consultants but the amount of empirical studies is limited. Although this research lacks empirical information as well, testing the proposed design could a way to observe the way in which consultants gather information. For instance, by measuring their usage of the forum, their attendance to events and online sharing of content, data can be analyzed on how they gather information. By using online channels to share information lots of data becomes available which can be valuable for researchers to acquire empirical information. Whether or not future research would use the design as proposed in this research, empirical data would be a valuable addition to the literature.

7. Conclusion

This research has given a unique perspective on the relationship between a vendor and consultant. Although the subject is hardly described in literature, this research has shown the potential for a relationship and how both vendor as well as consultant could benefit through the exchange of knowledge.

Although people might question the independency of consultants that have relationships with vendors, the lack of a relationship could also be seen as a disadvantage. Whereas the importance of knowledge for consultants is clearly grounded in this research, vendors can play a much bigger role since they are the source of knowledge which the consultant needs. Instead of only describing how knowledge sharing can be beneficial for both parties, a solution design for the problem of Network Inc. has been made as well. This sheds more light on all aspects that come into play when designing a solution in a corporate environment. So although the solution is really specific to Network Inc., the framework that the solution is based on can be used in a wide variety of companies and environments.

Considering our research question, the competitive advantage of the vendor-consultant relationship depends highly on the way in which the solution is implemented. It can be argued a competitive advantage is achieved when Network Inc. achieves a relationship with consultants whereas their competitors don’t. But since, for instance, Cisco knowledge is more common and widely spread among consultants, the improved exchange of knowledge by Network Inc. may only be enough to catch up. A competitive advantage will only be achieved when this increased consultant knowledge will lead to an increase in the consultant’s advice to their clients to use Network Inc. products. This should be taken into account when creating content and spreading knowledge.

Another way in which competitive advantage can be achieved is the information flowing back from the consultant to the vendor. This can entail all sorts of information including client and project information or product feedback. When Network Inc. can achieve an extensive relationship with consultants and increase the amount of information that consultants share with them, it could establish a competitive
advantage. Therefore, companies should focus not just on sharing knowledge but also on getting knowledge back and using this knowledge to improve their processes and operations.

This study highlights the reasons for a vendor to engage in a consultant relationship. Through interviews with consultants and a case-study, this study has shown the perspective of the consultant and perspective of the vendor that adds to current literature that focuses on either of the two parties. By studying both parties, it becomes clear a relationship is of interest and can be established while not in conflict with the integrity of the consultant.

This study should be seen as a starting point for future research. It justifies to study the relationship and research the potential impact of it. Although limitations in both existing literature as well as the research process limited the possibility to present valid and accurate facts, a plausible design has been proposed that can help future companies in finding new ways of achieving competitive advantage.

Vendors are looking for different ways to achieve competitive advantage and whereas most focus on the client or channel partners it becomes harder to differentiate from competitors. Consultants offer a new and less targeted group that has proven influence on the decision by clients. Although potential results of engaging with consultants are hard to formulate and therefore investment in for instance consultant focused CRM are hard to justify, research could be of high value to managers. This research therefore is a starting point of identifying and formulating new approaches to achieve competitive advantage.
Bibliography


Appendix 1: IDC MarketScape

Figure 13: IDC MarketScape: Worldwide Enterprise WLAN Vendor Assessment (IDC, Inc., 2015).
Appendix 2: Gartner

Figure 14: Magic Quadrant Wired & Wireless LAN 2015 (Gartner, Inc., 2015).
### Appendix 3: IT spending worldwide.

<table>
<thead>
<tr>
<th>Spending (Billions of Dollars)</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>Average Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Center Systems</td>
<td>162</td>
<td>169</td>
<td>186</td>
<td>193</td>
<td>196</td>
<td>199</td>
<td>201</td>
<td>3.5</td>
</tr>
<tr>
<td>Software</td>
<td>297</td>
<td>319</td>
<td>338</td>
<td>359</td>
<td>381</td>
<td>405</td>
<td>431</td>
<td>6.2</td>
</tr>
<tr>
<td>Devices</td>
<td>677</td>
<td>709</td>
<td>723</td>
<td>719</td>
<td>727</td>
<td>736</td>
<td>740</td>
<td>0.8</td>
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<tr>
<td>IT Services</td>
<td>937</td>
<td>970</td>
<td>1,004</td>
<td>1,043</td>
<td>1,085</td>
<td>1,131</td>
<td>1,183</td>
<td>4.1</td>
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<td>Communications Services</td>
<td>1,603</td>
<td>1,646</td>
<td>1,655</td>
<td>1,661</td>
<td>1,689</td>
<td>1,714</td>
<td>1,736</td>
<td>1.1</td>
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<tr>
<td>Overall IT</td>
<td>3,677</td>
<td>3,814</td>
<td>3,907</td>
<td>3,975</td>
<td>4,078</td>
<td>4,185</td>
<td>4,292</td>
<td>2.4</td>
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<table>
<thead>
<tr>
<th>Growth per Year (%)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
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<td>9.9</td>
<td>3.8</td>
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<td>1.4</td>
<td>1.1</td>
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<td>Software</td>
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<td>6.1</td>
<td>6.2</td>
<td>6.3</td>
<td>6.4</td>
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<tr>
<td>Devices</td>
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<td>2.6</td>
<td>2.6</td>
<td>2.5</td>
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</table>

*Table 12: IT spending by sector, worldwide 2013-2019 (Gartner, Inc., 2016).*
### Appendix 4: IT spending Netherlands

<table>
<thead>
<tr>
<th>Year</th>
<th>Computer Hardware</th>
<th>Software</th>
<th>Networking</th>
<th>Total IT</th>
<th>Total investment Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>3696</td>
<td>10843</td>
<td>1888</td>
<td>16427</td>
<td>115851</td>
</tr>
<tr>
<td>2008</td>
<td>3988</td>
<td>14361</td>
<td>1856</td>
<td>20205</td>
<td>145658</td>
</tr>
<tr>
<td>2009</td>
<td>3834</td>
<td>13842</td>
<td>1572</td>
<td>19248</td>
<td>134753</td>
</tr>
<tr>
<td>2010</td>
<td>3613</td>
<td>15053</td>
<td>1495</td>
<td>20161</td>
<td>128114</td>
</tr>
<tr>
<td>2011</td>
<td>3767</td>
<td>15123</td>
<td>2020</td>
<td>20910</td>
<td>133730</td>
</tr>
<tr>
<td>2012</td>
<td>3735</td>
<td>15577</td>
<td>1897</td>
<td>21209</td>
<td>124775</td>
</tr>
<tr>
<td>2013</td>
<td>4223</td>
<td>15413</td>
<td>1827</td>
<td>21463</td>
<td>119782</td>
</tr>
</tbody>
</table>

| Year | Mln euro (lopende prijzen) % | | | | | | | | | | % total investments Netherlands |
|------|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|
| 2005 | 22                          | 66 | 11 | 100 | 14 | | | | | | |
| 2008 | 20                          | 71 | 9  | 100 | 14 | | | | | | |
| 2009 | 20                          | 72 | 8  | 100 | 14 | | | | | | |
| 2010 | 18                          | 75 | 7  | 100 | 14 | | | | | | |
| 2011 | 18                          | 72 | 7  | 100 | 14 | | | | | | |
| 2012 | 18                          | 73 | 7  | 100 | 14 | | | | | | |
| 2013 | 20                          | 72 | 7  | 100 | 14 | | | | | | |

*Table 13: Investment in IT in the Netherlands, 2005-2013 (CBS, 2015)*
### Appendix 5: Consulting Niches (Swanson, 2010)

<table>
<thead>
<tr>
<th>Consulting niche</th>
<th>Innovation focus</th>
<th>Client contributions (within engagement)</th>
<th>Community contributions (across engagements)</th>
</tr>
</thead>
</table>
| Business strategy             | Strategy formulation                    | - Opens the firm to new pursuits and technologies  
- Positions the firm within its industry  
- Provides the basic rationale for innovation  
- Prepares the firm for change | - Translates strategy theory into frameworks and normalized consultative practice  
- Diffuses frameworks, normalized practice, and case experience in marketplace  
- Legitimates innovation as strategic response |
| Technology assessment         | New IT comprehension and adoption       | - Facilitates comprehension of new IT and its reception in markets  
- Provides customized IT research and benchmarking services  
- Facilitates identification and evaluation of alternative IT providers | - Promulgates organizing visions for new IT  
- Interprets market and developmental path for new IT  
- Legitimates new IT  
- Contributes to hype associated with new IT |
| Business process improvement  | Net IT adoption and implementation      | - Offers expertise and tools for modeling and evaluating business processes  
- Enables specification of proposed new business processes and IT  
- Provides business model for change, justifying adoption of new IT  
- Supports choice of implementation approach | - Translates knowledge of business processes into modeling tools and normalized consultative practice  
- Diffuses tools, normalized practice and case experience in marketplace  
- Legitimates new IT for business process improvements |
| Systems integration           | New IT adoption and implementation      | - Provides know-how for specification and implementation of IT solutions  
- Assists in choice of IT providers  
- Providers for integration with other systems  
- Supports change management | - Translates knowledge of IT solutions into normalized consultative practice and repository of reusable products  
- Diffuses normalized practice, case experience, and reusable products in marketplace  
- Legitimates packaged software solutions for innovating with IT |
| Business support services     | New IT adoption, implementation, and assimilation | - Provides for ongoing business partnership, e.g., through a Web service or outsourced operation  
- Enables client to contract in part for its new capabilities  
- Allows client to leverage longer-term relationship | - Provides normalized business support service as part of innovation solution  
- Diffuses normalized practice, case experience, and reusable products in marketplace  
- Legitimates packaged software solutions for innovating with IT |
Table 14: Consulting niches and contributions to innovation with IT (Swanson, 2010).

| | with a preferred consultancy | - Provides normalized business support service as part of innovation solution  
| | | - Diffuses service across clients  
| | | - Enriches market offerings in support of innovation  
| | | - Legitimates outsourced business solutions. |
Appendix 6: The stages of the interview.

Setting the stage of an interview is an important aspect of the interview itself. The stage should encourage the interviewees to describe their points of view on their lives and worlds (Kvale, 2007). To do this, an interviewer guides the discussion through several stages, paying attention to how well the intensity and emotional and intellectual challenge of the questions matches the depth of the relationship between interviewer and interviewee (Rubin & Rubin, 1995). These 7 stages can be used as a guide for the interviewee how to deepen the interview and will differ for every interview. Also, not all seven stages have to be followed, in some cases the stages might blend into each other more or less.

Stage 1: Creating natural involvement

Begin an interview with an informal chat that points in the direction of the topic. If it seems appropriate, you might want to try to put the interviewee at ease by beginning with a mild joke or tease. The early chat should convey an interest in and a supportive attitude toward the interviewee’s life or work. You can mention experiences that you have had that made you interested in the topic. After a few minutes you can move into a more formal introduction.

Stage 2: Encouraging Conversational competence.

Since some interviewees might doubt their own competence for the interview, the researcher can start to assure the interviewee that they are by for instance mentioning other people identified them to you. Early questions should be core to the subject, but not threatening, and should deal with matters that the interviewee almost certainly knows about and, ideally, feels good about.

Stage 3: showing understanding.

To encourage the interviewee to be frank and open, the researcher should show he understands the content by asking follow-up questions which demonstrates you followed the discussion and pulled out the main themes. The research wants the interviewee to know they are paying attention to how they feel as much as to what they know. The tone of the researcher’s voice can be understanding or amazed.

Stage 4: getting facts and basic descriptions

After showing you can understand the interviewee both conversationally as well as emotionally, basic information of the topic can be obtained. You encourage the conversational partner to talk at length on the subject at hand, initially covering a broad territory and then focusing in on more specific matters. You probe the answers and ask follow-up questions, exploring the field of inquiry.

Stage 5: Asking difficult questions.

At this point it is possible to deal with more difficult, emotional or sensitive matters. It is different for people what the sensitive questions are. One way of figuring out what people find difficult or sensitive is to pay attention to places earlier in the interview where the conversational partner seemed hesitant or avoided some part of a broader question.

Stage 6: Toning down the emotional level.
After the more emotional stage, it is important to tone the conversation down. This could be done by bringing the conversation back to earlier subjects that are of import, but little threat and ask for additional information or documents on these matters.

Stage 7: Closing while maintaining contact.

You need to indicate the interview is ending. You might want to ask if the interviewee might be called by name or not. You should try to keep the door open to continuing the discussion or asking additional questions or ask for a follow-up gesture.
# Appendix 7a: Thematical Interview Guide

## Introductie.
- Wie ben ik.
- Waar doe ik mijn onderzoek over, etc.
- Zowel Network Inc. als Universiteit noemen.

## Company
1. Precieze functie bij het bedrijf?
2. Wat is de specialisatie van het bedrijf?
3. Bij welke fase in het verkoop process bent u betrokken?
4. Certificeringen

## Vergelijking tussen deze 3 implementatie producten. Wanneer de geinterviewde geen ervaring heeft met location-based services kunnen vraag 5 en 8 wel gesteld worden.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>Advies Traject.</td>
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<tr>
<td></td>
<td></td>
<td>Hoe verloopt het advies traject?</td>
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</tr>
<tr>
<td>2.</td>
<td>Opdrachten/Leads.</td>
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<tr>
<td></td>
<td></td>
<td>Waar komen opdrachten vandaan?</td>
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<tr>
<td>3.</td>
<td>Opdracht omschrijving</td>
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<tr>
<td></td>
<td></td>
<td>Wat is de opdrachtomschrijving?</td>
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<tr>
<td>4.</td>
<td>Project duur.</td>
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<tr>
<td></td>
<td></td>
<td>Hoe lang duurt gemiddeld een project?</td>
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<tr>
<td>5.</td>
<td>Kennis?</td>
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<td></td>
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<td>Heeft u genoeg kennis in een project? Wat voor soort kennis gebruikt u vooral?</td>
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<tr>
<td>6.</td>
<td>Rol.</td>
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<tr>
<td></td>
<td></td>
<td>Wat is uw rol? Verschilt dit per klant?</td>
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<tr>
<td></td>
<td></td>
<td>Hebben klanten welleens een voorkeur voor een vendor en hoe ga je daarmee om? Verloopt het traject altijd eerlijk?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Vendor contact.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Heeft u vendor contact? Waarover?</td>
<td></td>
</tr>
</tbody>
</table>
9. Project voorkeur
   ➔ Welke projecten geeft u de voorkeur en waarom?

Algemene vragen (afhankelijk of deze al behandeld zijn of niet)

1. Hoe houdt u uw kennis up-to-date?
   ➔ Waar haal je je informatie vandaan?
2. Ziet u een rol voor vendoren in het verspreiden van informatie?
   ➔ Hoe zou een vendor hier op in kunnen spelen?
3. Maakt u gebruik van social media?
   ➔ Welke social media en waarvoor?

Toekomst./Afsluiting

1. Wat maakt uw beroep zo mooi?

Appendix 7b: Dynamical Interview Guide

Introductie.


2. In welke markt opereert ...... (naam bedrijf) en waar is het bedrijf in gespecialiseerd?
   ➔ Wat is uw functie binnen het bedrijf?
   ➔ Kunt u de positie van het bedrijf aangeven op de IT lifecycle? In welk kwart nemen ze voornamelijk deel?
3. Om welke toepassingen wordt u door klanten voornamelijk gevraagd? (WLAN implementatie, location-based services, security software, WLAN management software etc.)
   ➔ Kunt u een voorbeeld geven van een recent project?
4. Hoe onderscheidt u zich van andere IT consultants? Heeft u bijvoorbeeld een certificering?

Vergelijking tussen deze 3 implementatie producten. Wanneer de geinterviewde geen ervaring heeft met location-based services kunnen vraag 5 en 8 wel gesteld worden.

<table>
<thead>
<tr>
<th></th>
<th>WLAN 1 locatie</th>
<th>WLAN meerdere locaties + NAC</th>
<th>Location-based services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advies Traject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Opdrachten/Leads</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Opdrachtomschrijving</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. Traject duur.</td>
<td></td>
<td></td>
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<tr>
<td>5. Kennis:</td>
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<tr>
<td></td>
<td>Ervaring</td>
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<tr>
<td></td>
<td>Kennis binnen het bedrijf</td>
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</tr>
<tr>
<td></td>
<td>Externe kennis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Rol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Klant voorkeur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Vendor contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Project voorkeur</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Advies Traject.
   Vraag: Uit welke stappen bestaat het advies traject en hoe verschilt het tussen deze projecten?
   ➔ Met wat voor vraag komt de klant meestal?
   ➔ Heeft de klant al een bepaalde voorkennis?

2. Opdrachten/Leads.

3. Opdracht omschrijving: een opdracht kan duidelijk geformuleerd worden of juist een heel open karakter hebben.
   Vraag: Hoe wordt de opdracht omschrijving geformuleerd door de klant?
   ➔ Hoe verschilt dit per project?

4. Project duur.
   Vraag: Hoe lang duurt gemiddeld een project?
   ➔ Kunt u uitleggen waarom een bepaald project langer duurt?

5. Kennis?
   Vraag: Kijkend naar de verschillende soorten opdrachten, kunt u aangeven wanneer u voornamelijk op ervaring een voorstel zou kunnen schrijven, zonder extra kennis op te doen?
   ➔ Bij welke projecten kunt u uit uw eigen informatie of bedrijfsdatabase kennis op doen?
   ➔ Bij welke projecten moet u extern op zoek naar informatie?
   ➔ Stel, uw klant zou u vragen om een voor u relatief onbekende toepassing waar u weinig ervaring mee heeft/location-based oplossing. Wat zou u met deze vraag doen? (afwijzen, doorverwijzen naar collega, zelf informatie zoeken en advies schrijven?)

6. Rol.
   Vraag: Wat voor rol neemt u aan in het advies traject? Dominante rol waarin u dmv uw kennis een advies schrijft voor de klant? Neemt de klant juist het voortouw en omschrijft die wat u precies moet uitzoeken? Gaat het in samenwerking?
   ➔ Ziet u uwzelf meer als een partij tussen de klant en de partner in?

   Komt het welleens voor dat een klant een voorkeur heeft die het voor u lastiger maken een advies te schrijven, bijvoorbeeld vendor voorkeur?
   ➔ Hoe gaat u daar mee om?
   ➔ In welke gevallen komt dit het meest voor?
   ➔ Hoe zorgt u ervoor dat u zelf onafhankelijk blijft?
8. Vendor contact.
   Question: Komt u welleens in contact met vendoren?
   ➔ Zo ja, bij welke opdrachten gebeurt dit het meest?
   ➔ Waar gaat dit contact voornamelijk over? Wat leert u hiervan?
   ➔ Is het eenvoudig vragen te stellen bij vendoren? Hoe lang duurt dit?
   ➔ Zo nee, waarom niet?
   ➔ Zou u hier wel behoefte aan hebben?
   Soort contact.
   Vraag: kijkend naar de verschillende opdrachten, aan wat voor soort contact zou u de voorkeur geven?
   Social media, consultant programmas, telefonisch, online seminars, bijeenkomsten(zou u hier de tijd voor vrij kunnen maken)

9. Aan welke projecten geeft u de voorkeur? Welke projecten zijn het meest winstgevend en welke haalt u het meeste voldoening uit?(complex vs. Eenvoudig)

Algemene vragen (afhankelijk of deze al behandeld zijn of niet)

4. Hoe houdt u uw kennis up-to-date?
   ➔ Krijgt u hier vanuit uw bedrijf tijd voor, doet u dit in uw privetijd?
   ➔ Wat voor middelen gebruikt u hiervoor? Leermateriaal zoals boeken en cursussen of leert u het meest van uw opdrachten.
   ➔ Bent u hier continu mee bezig of is dit voornamelijk opdracht gebonden?

5. Ziet u een rol voor vendoren in het verspreiden van informatie?
   ➔ Op wat voor manier zou een vendor in het meest gunstige geval informatie met u kunnen delen?
   ➔ Maakt u bijvoorbeeld gebruik van partner programma?
   ➔ Zo ja, van welke vendoren?

6. Wanneer er een partner programma zou bestaan vanuit de vendor. Zou u dan ook een echte status hier aan willen koppelen of gaat het om te kunnen laten zien aan uw klanten of gaat het puur om kennis inwinning?

7. Maakt u gebruik van social media bij het opdoen van kennis en onderhouden van contacten?
   ➔ Ja, welke social media?
   ➔ Deelt u zelf welleens informatie via social media?
   ➔ Ja, om wat voor informatie gaat dit en met wat voor doel doet u dit?

Toekomst./Afsluiting

Wat maakt uw beroep zo mooi?
Table 15: Evolutions of Community Members’ contributions of Knowledge.

<table>
<thead>
<tr>
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# Appendix 9A: Citations from interviews

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-innovative</th>
<th>Innovative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advice Trajectory</strong></td>
<td>- R10: A rather simple solution is sufficient most of the time.</td>
<td>- R4: You start with discussing what the client wants to do with it, the amount of capacity, users etc.</td>
</tr>
<tr>
<td></td>
<td>- R11: I can formulate a report but most of the times, after a few conversations it’s clear what the solution will be.</td>
<td>- R6: It’s important to find out what the real goal is. This takes some time since the diversity of the company can make the project very complex.</td>
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<tr>
<td></td>
<td>- R5: You take comparable steps, just a little quicker.</td>
<td>- R7: You try to make a business case, but in some cases this takes some steps back to find out what the real goal is. Then you try to find out what the technical and functional demands are which leads to an infrastructure design.</td>
</tr>
<tr>
<td><strong>Client Knowledge</strong></td>
<td>- R2: They didn’t understand it at all. They didn’t understand what we are talking about.</td>
<td>- R2: There are more people in the organization that understand networking. They had already thought about a solution and you can talk with them about technical aspects.</td>
</tr>
<tr>
<td></td>
<td>- R10: Their knowledge was far behind on the newest innovations. They were not up-to-date.</td>
<td>- R2: In those kind of companies, most networking managers know what they are talking about.</td>
</tr>
<tr>
<td></td>
<td>- R9: They don’t link their questions to the technology and don’t see how that could get the infrastructure more complex.</td>
<td>- R7: There are not a lot of managers that know what they are talking about, they let the IT department decide.</td>
</tr>
<tr>
<td></td>
<td>- R7: They said: “Why don’t we just buy some access points at Media Markt?”</td>
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</tr>
<tr>
<td><strong>Number Responsible parties</strong></td>
<td>- R12: Often, there is only one contact person.</td>
<td>- R11: We worked together with all parties: IT management, account management, local supervision, finance, marketing, general management.</td>
</tr>
<tr>
<td></td>
<td>- R11: We were in contact with the IT manager. But he was the only one responsible for IT so therefore he was called “manager”.</td>
<td>- I started with the strategy makers to define what they wanted and then went down the levels in the organization to find out what the company-wide opinion was.</td>
</tr>
<tr>
<td></td>
<td>- R7: We worked together with the IT department, only a couple of people.</td>
<td>- R7: There were around 12 people in the meeting room with an opinion.</td>
</tr>
<tr>
<td></td>
<td>- R9: We worked together with marketing and management more than with IT.</td>
<td>- R11: The CEO had a totally different vision than the IT-manager and it turned out into a political game. It was a bit of a fight but in the end everyone was happy.</td>
</tr>
<tr>
<td><strong>Project description</strong></td>
<td>- R10: We have a problem with.... That’s mostly the motive to call us.</td>
<td>- R2: With IT managers, finance, security managers or security officers. It’s a wider public.</td>
</tr>
<tr>
<td></td>
<td>- R1: The project description was really basic: “ We want Wi-Fi”.</td>
<td>- R6: The description was made with an administrator level, by the IT department</td>
</tr>
</tbody>
</table>
| Knowledge of the consultant | -R5: With such a small customer, we can handle it easily. If we have a problem, we find out how to fix it rather fast.  
-R7: In this case, my knowledge was sufficient.  
-R10: In these types of cases, my knowledge is sufficient.  
-R11: For the smaller cases, it’s always good enough.  
-R5: I trusted on my own knowledge and experience. | -R2: You won’t know everything at once but your colleague’s are one of the most important sources.  
-R6: At the start of the project, your knowledge is more often not sufficient. I think it’s not the right mentality to think your knowledge is sufficient, you always have to look for new information when starting a case.  
-R1: In those situations, we send our most experienced consultants. You don’t want to send a Junior then. |
| Consultant Role | -R1: We always try to cooperate but you have a more dominant and navigating role. Clients mostly aren’t aimed at cooperation.  
-R5: We took control since they didn’t wanted to know what we did, as long as we fixed the problem.  
-R11: You’re less focused on strategy and more in a technician role which can be really fun. | -R11: The company didn’t have all knowledge but was really looking for a conversational partner with the expert knowledge who could also talk with the business and not focus on technology.  
- It depends on who you’re talking to. On location I’m more of a technician but with managers you’re more of an advisor.  
-R10: You have an advisory role but you need to be able to get all people aligned and to create understanding for each other’s issues. |
| Vendor Preference | -R10: They don’t really mention anything about vendors.  
-R2: They didn’t even know what Network Inc. was, they only mentioned Linksys (consumer products)  
-R4: It was an extension of an existing infrastructure, so you stay with the same vendor.  
-R12: They were purely focused on price. - They know they shouldn’t choose on price, but they still did. | -R2: The client studied the possibilities and knew all possible vendors.  
-R6: When they have an installed base of a certain vendor, chances are small they will choose for a different one.  
-R12: More often they choose for quality.  
-R9: They were standardized to Cisco so it wasn’t really an issue.  
- Quality is just much more important with such implementations.  
-R7: In this project they had contacts/friends at a vendor. |

Table 16: Citations from interviews
### Appendix 9B: Citations from Interviews on Communication

<table>
<thead>
<tr>
<th>Category</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Related Vendor contact</td>
<td>- R1: Software defined networking; it is something new, very pricy so you don’t see it that often. In those cases you keep short lines with a system engineer from the vendor so they can assist when needed.</td>
</tr>
<tr>
<td></td>
<td>- R10: If it’s a generic problem, a database is sufficient but when specific knowledge is needed I would prefer to be able to call someone.</td>
</tr>
<tr>
<td></td>
<td>- R8 When writing an RFP, I’ve been in contact with Network Inc.. In those cases it’s more easy to just have quick contact.</td>
</tr>
<tr>
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<td>- R9: We talk to pretty much all big vendors from time to time.</td>
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<td>- R10: Its mostly personal contacts but after a while, these contact can move to other companies or so, so a general contact person would be nice.</td>
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<td>- R12: Personal relationships are really important. When you know each other you more easily share information. You help each other by giving information about clients that could be interesting.</td>
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<td>- R5: We just use the standard support contacts.</td>
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<td>Non-project related:</td>
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<tr>
<td>Techsessions</td>
<td>- R9: Some employees go to vendor events and when they come back and have interesting information, they share it with the rest of the company in a “pizza-session” or something.</td>
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<td></td>
<td>- R11 We organize sessions where we invite a vendor, in some cases multiple vendors since we get a lot of offers from vendors. We do these sessions in the evening since we work by the hour.</td>
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<td>- R7: We always ask a vendor to leave their marketing or sales people at home. We are only interested in the technical story of a pre-sales engineer so the consultants can really question him.</td>
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<td>Events</td>
<td>- R4: Yes, some go to these events but mostly the more senior engineers.</td>
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<td>- R1: Not all people can go, we try to divide it a bit but mostly we send 1 or 2 people to these events.</td>
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<td>- R10: Every month I have 1 or 2 seminars that I want to visit. That takes time and money since I can’t work at the same time but I think it’s worth it.</td>
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<td>- It would be no problem to visit pre-sales or partner seminars as long as the subjects are relevant for us as well.</td>
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<td>- R3: These events are not just to gain knowledge, also to nurture the relationship.</td>
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<td>- R11: I have to choose between the events I go to so I just pick the ones with the most relevant content.</td>
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<td>Social Media</td>
<td>- R2: I follow a couple of Twitter accounts, they often link to interesting pages and blogs.</td>
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<td>- R11: Twitter has a really dedicated community of experts which is really interesting. I’m more a reader than a contributor but that might grow.</td>
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<td>- R6: I just use LinkedIn for my contacts, more like an online CV. I never use Facebook for business related things.</td>
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<td></td>
<td>- R10: I don’t really search on LinkedIn, it’s more when I see messages that might be interesting that I do read them.</td>
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<tr>
<td>Forum</td>
<td>- R2: The forum of Network Inc., Superheads, works really good. I really like it.</td>
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| **R3:** I use the forum of Superheads but also the one of Cisco. Their platform is really good but I think there are some employees on that platform. The speed and quality of the posts and answers you get was astonishing.  
 **R8:** I don’t really like a forum since you can’t ask specific questions on it. Since everyone can answer your question its difficult to formulate it in a way everyone understands on a forum.  
 **R11:** I do use Superheads but in some cases it gets to complicated and I can’t follow it anymore.  
 **R12:** Some vendors do make portals specifically for consultants to make it more easy to find information.  
 | **R5:** Since our primary value is knowledge, it’s important to being able to show you have this knowledge through certificates. It’s not just knowledge gathering but it also is a sort of status.  
 **R11:** There are certificates from vendors like Cisco CCNP and CCNI or Network Inc. but also from independent parties.  
 **Interviewer:** what certificates are more important? I think they are both equally important but they supplement each other.  
 **R6:** I’m don’t have certifications anymore and work more as a project-manager. I work together with people who have these certificates and I only need to know some of the technical parts, which I do.  
 **R9:** Certificates are almost always Cisco based but you need to put the word “level” behind it. So if it says CCNA, it really is CCNA-level engineer although they might have certificates from other vendors.  
 **R12:** Most consultant in the second phase of their career have had these certificates and focus more on strategy and advice, and therefore they don’t maintain these certificates.  
 | **Certificates**  
 |   |   |

*Table 17: Citations from interviews about communication.*