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<input checked="" type="checkbox"/>	Master's thesis
<input type="checkbox"/>	Licentiate's thesis
<input type="checkbox"/>	Doctoral dissertation

Subject	Management of IT	Date	15.5.2021
Author(s)	Hugo Biolchini	Number of pages	54+appendices
Title	Business-IT Alignment for Customer Relationship Management: an interpretive qualitative study on the business value of IT derived by CRM systems of a global institution		
Supervisor(s)	Prof. P. Rousseau		

**Abstract**

Does the level of business-IT alignment have a positive impact on CRM performance to deliver business value of IT? This research tests this question by using the previous literature and analyzing the model of Batenburg and Versendaal (2004). To answer this, questionnaires, interviews, and observations were conducted in one of the largest renewable energy companies which uses a well-known CRM for its commercial operations. The research model of this study goes further than the previous literature as it includes IT governance and CRM performance between the business and IT alignment and the business value of IT. In accordance with the previous literature, I found that a good level of cohesion between business and IT departments positively impacts CRM performance and enables the company to deliver business value of IT. IT Governance is an important prerequisite for having aligned IT and business departments and therefore also participates in the process of business value of IT creation. In CRM, business-IT alignment can be seen in two different ways. It can be first, a continuous Business-IT alignment that enables the business to improve its selling performance thanks to the CRM platform (information system) and second, a cohesive alignment during a CRM implementation or upgrade project within a company to improve the CRM (IT platform) and improve company's performance over the long term. It is the second type of alignment that is studied as a case study in this thesis, although I assume that the findings should be broadly similar for both types of alignment, it is important to state this. The findings in this thesis corresponded well with the statements of Perreault et al (2007) who mentioned that "CRM improves sales productivity", and Gellweiler (2017) who described that "higher levels of alignment have positive effects on company performance".

<b>Key words</b>	IT Governance, Business-IT Alignment, CRM, Business Value of IT
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**UNIVERSITY  
OF TURKU**

Turku School of  
Economics

# **BUSINESS-IT ALIGNMENT FOR CUSTOMER RELATIONSHIP MANAGEMENT**

**An interpretive qualitative study on the business-value of IT derived  
by CRM Systems of a global institution**

Master's Thesis  
in International Management of  
Information Technology (IMMIT)

Author(s):  
Hugo Biolchini

Supervisor(s):  
Prof. Patrick Reousseau  
M.Sc. M. Information Technology

29.5.2021  
Turku

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

# 1 MANAGEMENT SUMMARY

Previous literature exists and has been mentioned in this thesis about business-IT alignment and its effect on business. Other literature exists on Customer Relationship Management (CRM) to positively impact business performance. However, almost no literature has been found on the link between business-IT alignment and CRM in order to create business value in IT.

This research aims to make an interesting contribution on business-IT alignment in a large company using CRM to manage its business operations by conducting a case study on the Salesforce CRM platform of an international renewable energy company. More precisely, this case study includes interviews and questionnaires conducted with employees of the renewable energy company on both the business and IT sides to collect their views and the gap between the expected and actual level of alignment. In addition, this thesis is based on observations taken by myself during my internship as a Salesforce business analyst in this renewable energy company. The different variables of this thesis are: (1) IT Governance (2) Business-IT alignment success factors (3) CRM Performance (4) Business value of IT

The main findings of this thesis include: (1) IT Governance has a significant impact and positively impacts Business-IT alignment as it encompasses and drives this alignment. Secondly, (2) A strong level of Business-IT alignment positively impacts the performance of a CRM or positively enhances the success of a CRM upgrade project within an organization. Then, (3) A high level of CRM performance, especially thanks to business-IT cohesion, allows the company to benefit from the business value of IT and to realize better performance.

Finally, future research on this topic should focus more on the details of the business mechanisms within the CRM (IT platform) which actually increase the company's turnover.

## 2 PREFACE

The writing of this thesis was done in order to complete my graduation of the International master's in management of Information Technology (IMMIT) programme at IAE Aix-en-Provence, Tilburg University and Turku School of Economics (Triple Master). The reason why I chose to study this programme is the growing importance of information technology in business over the years. A hybrid degree that combines business and IT will enable me to work as an IT manager, at the intersection between business and IT departments in a company. The position of business analyst is also in my interest as I have experienced it during my internship or also to work as a consultant in order to sell information systems or services related to business technology as I like sales in general. For this reason, I am very interested to learn what are the factors that are important to maximize the impact of information technology to improve the performance of an organization, and more specifically how to align IT and business in a strategic manner.

I am grateful that I have been supported by some people during the writing of my thesis. Firstly, I would like to thank Patrick Rousseau, who is my master thesis supervisor and who was able to answer my questions in a timely manner when I had any concerns. His experience and knowledge in information systems helped me in the process of choosing the company for my internship and especially in the process of choosing the subject of my Master thesis.

More generally, I would also like to thank Eija Koskivaara, Catharina Ferry and Emiel Caron who have helped me to successfully complete each stage of the IMMIT programme, for each university transition in the different countries studied (France, Finland, the Netherlands). Regardless of the special conditions in 2020 with the global pandemic, they were able to guide me in the right way to be able to continue with the IMMIT programme properly.

Finally, I would like to thank my internship supervisor who gave me the right directives and advice and made me comfortable in my daily work within my internship organization. I would also like to thank all the people interviewed in the organization of my internship that were willing to answer the questionnaires and interviews. The interviewees gave me a better vision on how business and IT employees work together in the CRM of an international company.

Hugo Biolchini

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### 3 INTRODUCTION

The business-IT alignment is a topic that has been discussed numerous times in the field of Management of Information Systems. Already early publications such as the one from Chan (2002) who explained that Business-IT alignment and Business performance are correlated.

To summarize Business and IT alignments Chan (2002) outlined four preconditions:

- Communication and understanding between business and IT managers (Enns, 1997)
- Link business and IT missions, priorities, and strategies (Reich and Benbasat, 1996)
- Interconnected business and IS planning processes (Broadbent, 1991)
- Business executive's commitment to IT issues and initiatives (Lederer, 1987)

These conditions are used in the thesis to develop the questionnaires that were sent to the employees.

Few publications in the literature have linked the two topics business-IT alignment and CRM. Customer Relationship Management (CRM) is a strategic platform used by companies to manage interactions with customers and potential customers. CRM helps organizations streamline processes, build relationships with customers, increase sales, improve customer service and increase profitability (Salesforce.com, 2021).

According to Batenburg (2017) who developed a framework around strategic alignment within a Customer Relationship Management, CRM performance has a positive impact on the degree of maturity and alignment between IT and business departments.

Little information has been found about the relationship between CRM and the creation of business value of IT through this type of platform. According to Melville (2007), IT is not only a tool for automating processes, it can also increase productivity but also achieve organizational change. However, according to Sabherwal et. al (2015), IT investment alone will not directly affect the business value of IT systems. It is then interesting to investigate whether the business-IT alignment within an IT platform such as CRM participates in the business value creation process of IT.

### 3.1 Scientific Relevance

The research attempts to suggest a research model which evaluates the direct influence of business-IT alignment on CRM performance to deliver Business value of IT to the company. A total of 4 variables: IT governance, Business IT alignment, CRM performance and Business value of IT are presented to try to answer the research question. In addition, the thesis provides an answer to this question based on findings and gives recommendations for practice and future research.

This is a qualitative research, relying solely on previous literature and findings based on interviews, questionnaires conducted with some employees of my internship organization. The questionnaires allowed the development of statistics on the gap of the current perceived level of business-IT alignment and the level expected by the employees.

Chege et al (2018) mentioned that IT governance plays a crucial role in aligning business and IT departments. I will confirm this statement by using questionnaires and interviews with business and IT employees of an international company.

Batenburg (2007) mentioned that CRM performance is positive correlated with the degree of maturity of Business-IT alignment. This statement is verified with the help of questionnaires addressed to the employees of my internship company during this research. However, even though Batenburg's (2004) framework on strategic alignment within CRM is mentioned during this thesis, not enough people from the business side could be interviewed and not enough information around this topic was collected to be able to validate the entire framework.

### 3.2 Practical Relevance

The thesis focuses on Business-IT alignment within the CRM environment of a global renewable energy company. The company sector was not specifically chosen but it is the sector of my internship organization from which it is easier for me to obtain information about my research. In the renewable energy sector, as in many sectors today, IT plays a strategic role of great importance to face the growing competition. Indeed, globalization and technological advances are elements that have pushed all companies to be more competitive, and data and information now play an important role in business. Data and information are considered as intangible and unique assets that define the competitiveness of a company and that is why accurate analytical processing of information is of great importance (Chernysheva, Y., Shepelenko, G., 2018). The variables of the research model are going to be explored with the help of interviews carried out with the business and IT personnel that work for the organization. The study seeks to deliver actionable guidance to IT and business managers in a variety of ways.

Firstly, executives will obtain a better comprehension of the different elements for successful business-IT alignment by studying IT Governance in the first place to understand how to manage this complicated correspondence uniting Business and IT units within the company. When managers have understood the points for improvements, they can analyze them within their own organization through questionnaires distributed to their employees. The goal is to understand the current state of their situation and to calculate the efforts to be taken to reduce this gap.

Secondly, managers will have a clearer understanding of CRM performance as detailed in this research. They will be able to implement the necessary means to enhance CRM performance in their company, ensuring that their employees make the fullest use of it. Again, through questionnaires, they will be able to determine how satisfied their employees are with their current CRM platform and they will eventually be able to consider how to improve, update or replace it.

Thirdly, the practical implications of this paper are not only of interest to the company under study. They can be applied to companies of different sizes or from different sectors to measure their business-IT alignment within their CRM and create a higher business IT value.

Finally, managers should keep in mind that the case study in this thesis reflects findings from business and IT employees working in a CRM environment. The

recommendations may therefore not be of interest to business and IT employees working in different environments.

### 3.3 Problem statement and research question

There is currently no unanimity that alignment between Business and IT units is a key determinant for CRM performance and the business value creation derived from IT.

CRM systems, while they present many advantages for big companies such as customer retention in front of growing global competition can be very costly and the chances of unsuccessful implementation/upgrade of these systems still exist, which is a growing concern for business decision makers. For these reasons, in order to maximize the adoption and use of these IT platforms (CRM is considered as cloud as a service), it is important for IT governors to value the alignment between business and IT departments while using a CRM with the aim to deliver business value of IT.

Understanding the Business and IT relationship and the frequency in which they are linked in CRM systems is not that simple. The complexity of this era of research is compounded by the fact that it is important to understand the structure of disparate degrees of alignment required linking business and IT departments strategically at each level of the organization. Based on this statement, the following research question can be drawn:

- *How does business-IT alignment in an organization using a CRM system affect the business value of information technology?*

This research question is proposed to establish a structural method to study the theoretical implications of past literature.

### **3.4 Research Method**

The writing of this thesis is supported by an explanatory qualitative research method. Firstly, a survey reflecting previous literature was established as well as the research question, and the research model. The results of the questionnaires were analyzed in the form of statistics and provide an insight of the satisfaction gaps from the employees of my internship organization. In addition to the questionnaires, individual interviews were conducted with employees to obtain more details about the business-IT cohesion within the CRM of my internship organization. In addition to this, observations were made by me during my role as an intern as a salesforce business analyst, throughout my internship.

### **3.5 Structure of the thesis**

The thesis is composed in this following format:

Section two highlights all the previous literature on Business-IT alignment and CRM Performance to deliver IT Business value. This section also highlights the research model variables that are explained and concludes with the hypotheses. Section three highlights the description of the qualitative research for this thesis, the description of the company sector of my internship with the working method for the questionnaire and interview. Section four highlights the findings of the questionnaires in the form of statistics and the interviews in the form of a summary. Section five contrasts the previous literature with the findings during the questionnaires and interviews with the employees of my internship company and the limitations found for this research. Finally, Section six concludes this thesis drawing a conclusion on this research, giving indications for further research and recommendations for action.

## 4 LITTERATURE EXPLORATION AND RESEARCH MODEL

### 4.1 Business IT alignment and its impact on CRM Performance

#### 4.1.1 IT Governance

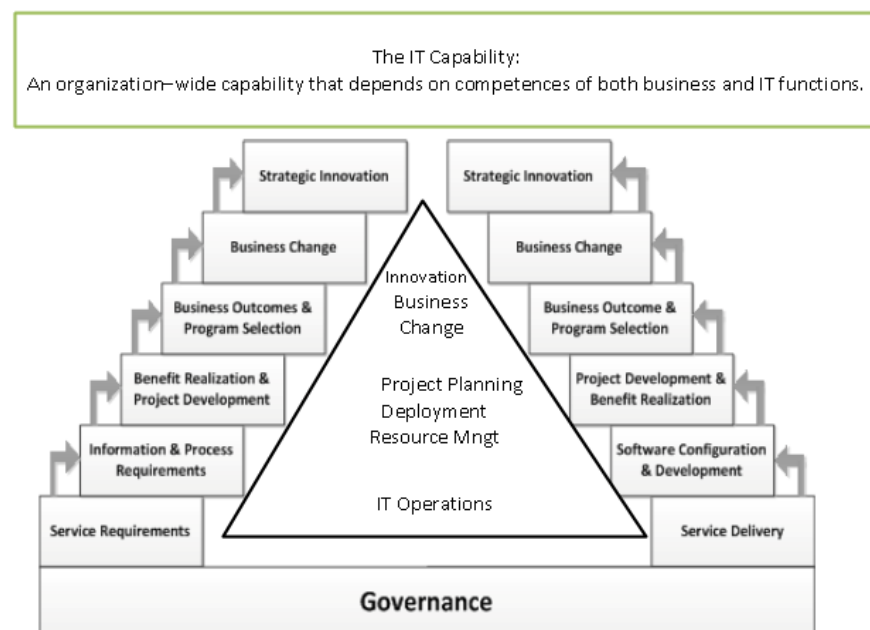
The impact of information systems on business and its performance is a topic which has been discussed in the IS literature for more than two decades. Companies globally have been using information systems such as CRM to improve their business performance and literature has shown that many elements are important to consider for delivering business value using information systems. According to previous Literature, the factors that appear to be most important for companies using IT systems to deliver business value are IT Governance and Business-IT alignment. To clarify, IT governance is a component of enterprise governance and the Business-IT alignment is a component of IT governance (Gellweiler, 2017).



**Figure 1. schema from the Enterprise Governance of IT course which describes in a broad way how the business value of IT is generated (Ribbers, P. M., Benson, R. J., Blistein, R. 2019)**

De Haes & Van Grembergen (2005) described the IT Governance as "the definition and implementation of processes, structures, and relational mechanisms that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of value from IT-enabled investments." It is also important to point out that IT governance being an important element in facilitating Business-IT Alignment, IT Governance leaders need to understand the needs of their systems (business and operations) as well as the fundamentals of information management and the benefits of leveraging IT (Spiers, D., Buskirk R., Booth, R.,

McKiney, S., 2012). When IT is integrated into the business and IT Governance is put in place, the traditional "gap" between the Business and IT departments of the company disappears. The 'Staircase' graph by Benson, Ribbers & Blitstein (2014) represents the IT capability which is 'an organization-wide capability that depends on competences of both business and IT functions'. More precisely it shows the gap reduction between the IT and business side at each level of the company very accurately.



\*) R.J. Benson, P.M. Ribbers, Ron Blitstein: Strategic IT Management. Wiley 2014

**Figure 2. Strategic IT Management to improve IT capability (Benson, R. J., Ribbers, P. M., Blitstein, R., 2014)**

The definition of Strategic Alignment is “the extent to which the organization’s portfolio of IS/IT” investments directly enables and supports its business strategy. (Peppard & Ward, 2016). It is important to specify that IT governance plays a crucial role towards the alignment of business and IT departments as it helps to align IT and other units more closely with an organization's important business needs. These departments working together will help companies leverage technologies to capitalize on opportunities to save costs, improve business processes and edge out less innovative competitors (TechTarget, 2018).

Interview questions on IT Governance	Source
Processes to support the business-IT alignment are put in place in our organization	De Haes & Van Grembergen (2005)
IT governance plays a crucial role towards the alignment of business and IT departments	TechTarget (2018)
IT Governance leaders understand the needs of their system in our organization	Spiers, Buskirk, Booth & McKinney (2012)

**Figure 3: questionnaire questions regarding IT Governance**

These questions are designed to relate the actions taken for IT Governance to the benefits they bring to the business. The questions are based on literature from De Haes & Van Grembergen (2005), TechTarget (2018) and Spiers, Buskirk, Booth & McKinney (2012). The source is provided for each question and the questions with full sources can be found in the references at the very end of this paper.

The ways in which IT Governance is implemented and managed affect the alignment of business and IT departments in a company. Based on my findings and discussions of past literature, I hypothesize:

**Hypothesis 1:** good level of IT Governance positively impacts the business-IT alignment.



#### 4.1.2 Business-IT alignment

To start with the early literature on business-IT alignment, Reich and Benbasat (1996) defined it as "the degree to which the mission, objectives, and plans contained in the business strategy are shared and supported by the IT strategy." Later, Luftman and Brier (1999) characterized good alignment as "when the organization is applying appropriate IT in given situations in a timely way, and that these actions stay congruent with the business strategy, goals, and needs".

Then a few years later, we had McKeen and Smith (2003) that supported the fact that strategic alignment of IT exists when an organization's goals and activities and the information systems that support them remain in harmony. In 2005, Campbell described Business IT Alignment by the following definition "Alignment is the business and IT working together to reach a common goal". In 2006, Abraham has defined this alignment more broadly: "Strategic alignment, is then, everyone rowing in the same direction". In this thesis I will support my research by using the following Business-IT alignment description, "the unity between implemented IT strategy and the business strategy" (Henderson & Venkatraman, 1993).

Business-IT alignment concept has been used for more than two decades and is considered as the key factors/concepts that mediate between IT investment and IT business value (Luftman, 2005). This alignment would therefore be of great importance in the performance of companies. Byrd et al. (2006) specified that strategic alignment had a direct impact on performance as a mediator between IT investment and business performance and that the real value in alignment is in leveraging the firm's IT investment. Prior research shows that there is a correlation between business-IT alignment and business performance: Gellweiler (2017) pointed out that there is evidence that higher levels of alignment have positive effects on company performance regardless of industry type or organization structure. First, business-IT alignment has a positive impact on the business value of IT in terms of information sharing and productivity (local business department level) and cost savings (central IT level) and it is also directly positively affected by IT alignment preconditions and processes (Poelen, 2017). Secondly, strong IT alignment preconditions and a strong IT alignment process will have a positive impact on business IT adjustments. In addition, strong IT alignment

preconditions can definitely enhance the relationship between IT alignment process and IT alignment (Poelen, 2017)

The business-IT alignment is however a continuous process that must be applied and improved on a daily inside business activities. It contains a series of learning activities and it does not have an end point, it is a long term journey. As it is a long-term project to keep business and IT aligned, some measures can be put into place to make the company work toward this achievement. As already mentioned in the introduction, Chan (2002) summarized four prerequisites for keeping business and IT aligned: *Communication and understanding between business and IT managers (Enns, 1997)*, *Link business and IT missions, priorities and strategies (Reich and Benbasat, 1996)*, *Interconnected business and IS planning processes (Broadbent, 1991)*, *Business executive's commitment to IT issues and initiatives (Lederer, 1987)*. However, to avoid Business-IT misalignment Chan (2007) has also emphasized the importance of education and training of employees as well as a clear visibility of IT staff in the structure but also the IT environment in general. This seems logical and normal, but it is important to point this out because it can happen quite often that employees are poorly trained in certain information systems, or that they do not have a good overview of the company's IT structure. As a result, not having employees properly trained and or with a lack of understanding of the IT system can then lead to misalignment. Regarding the use of IT systems, in the case of my internship with CRM systems, It is clear that IT skills are a critical prerequisite for employees who are either new to CRM technology or are upgrading to a new CRM system. (Saini, A., Grewal, R., & Johnson, J. 2010). It is then the role of the manager to ensure that employees use CRM satisfactorily to provide quality services (Hsieh, J., Rai, A., Petter, S., & Zhang, T., 2012) and provide additional training if needed, accordingly.

In any given relationship, interpersonal or commercial, a common contributory factor to breakdown and failure is poor communication, which has been shown to directly affect the integration of Business and IT strategy within an organization (Tourish & Hargie, 2000). Tukiainen (2001) identified that planning an agenda for communication can increase satisfaction of communication experiences. According to P. Ribbers, one of the keys for success in management of IS/IT are the relations between IT and Business Management, between IT and Business operations but also with outside IT services suppliers. Indeed, frequent, and effective communication is an

important element of business-IT alignment. The key to effective communication is to "see the big picture", but more specifically to have a deep understanding of the relationship between the business and IT and the organisation's internal communication practices in order to provide appropriate solutions to existing challenges (Coughlan, J., Lycett M., Macredie R., 2005). The communication and understanding between the business and IT managers are an important prerequisite for IT adjustment fit. After all, if the communication between the business manager and the IT manager is inefficient and both do not understand each other, it will be difficult to align the Business-IT strategy and process (Poelen, 2017).

In order to enable the successful use of an IT tool by business employees, it is essential to firstly make them understand the benefits that it can bring to the business in terms of results, and secondly to ensure that they have accepted the necessity to use these IT tools in their daily activities at work (User Acceptance). It is then important to motivate users to accept information Technology (Venkatesh & Davis 2000). However, in the case of a CRM (Customer Relationship Management), sales technology need to go beyond "adoption" issue (Ahearne, Jelinek and Rapp 2005) and salespeople need to be entirely committed to the use of these information systems to improve results and must be able to see these CRM systems as performance enhancers. Zablah, Belenger & Johnston (2004) explained that a good way to get employees and salespeople on track to adopt CRM information systems is to align the CRM plan with employees, processes, and technology.

Interview questions on Business IT-alignment	Source
Information Technologies support the business strategy and provides value to it	Gellweiler (2017)
Business and IT missions, priorities and strategies are linked	Reich and Benbasat (1996)
Businesspeople accepted the use of IT as a performance improver	Zablah, Belenger & Johnston (2004)
IT education and training is provided to employees	Chan (2007)
Business and IT managers communicate and understand each other	Broadbent (1991)
The level of communication between business and IT departments is great	Tourish & Hargie (2000)
There is a planned agenda for communication (daily/weekly call)	Tukiainen (2001)
Higher levels of alignment have positive effects on company performance	Gellweiler (2017)

**Figure 4: questionnaire questions on business-IT alignment:**

These questions represent the Business-IT alignment variable in the questionnaire. The questions are derived from the existing literature from Gellweiler (2017), Reich and Benbasat (1996), Zablah et al (2004), Chan (2007), Broadbent (1991) Tourish and Hargie (2000) and Turkiainen (2001). The references for each question are in brackets.

In summary, business-IT alignment is a concept that has been used and observed for more than two decades, and it is summarized as the unity of the business and IT departments of an organization. According to previous literature, a good level of alignment depends on many factors such as training/education of employees with regard to the proper IT system but also effective communication between departments and having employees who are fully committed to the use of the IT systems they use and aware of their importance. Based on my findings and discussions of past literature, I hypothesize:

H2: Business-IT alignment positively impacts the business value of IT

## 4.2 CRM Performance to deliver IT Business value

### 4.2.1 Customer Relationship Management

The use of a CRM information system in companies has become commonplace in all major international companies. According to McCalla et al (2003) Employees' use of CRM during customer interactions is mandated in many organizations. In 2017, Gantz et. al predicted that CRMs will increase global business revenues by \$1.1 trillion by 2021, which represents the creation of 800,000 new jobs. The literature has been defining Customer Relationship Management (CRM) for over 20 years, and the definition has remained the same or changed very little since the existence of these types of information systems. Srivastava, Shervani & Fahey (1999, p. 169) have defined CRM as "all aspects of identifying customers, creating customer knowledge, building customer relationships, and shaping their perspectives of the organization and its products". Zoltners, Sinha & Zoltners (2001) clearly recognized technology's significance to CRM processes and described CRM more simply as "the use of technology to manage customer interactions and transactions". Customer relationship management is based on the belief that establishing a good relationship with customers is the best strategy for making them "loyal customers", and loyal customers are more profitable than the non-loyal ones (Landry et al., 2005) It is a customer-oriented business process management strategy that maximizes relationships and uses available technology to cover the entire organization. Rapp et. al (2008) provided a more detailed definition of CRM which is "a utilizing customer-centric technology tools that help salespeople formulate strategies to achieve effectiveness in their selling methods". Hence the importance of having coordinated and aligned business and IT strategies and the full commitment of salespeople to the use and leverage of IT systems to both sell and maintain their customer relationships. CRM, while it can boost sales, is a tool that has been designed with long-term sellers in mind to maintain customer relationships for a long time.

A company strategy with regards to its CRM should incorporate the whole enterprise and according to previous academic work, alignment within the use of CRM is a critical factor for the success of these types of systems, more precisely to enable them to deliver value to the business and improve their performance.

One of the best ways to develop long-term, mutually beneficial relationships in which seller and buyer focus on generating more satisfying exchanges (Sheth & Sisodia, 1995)

is to increase communication with the right customer with the right offer through the right channel at the right time (Hall & Saddle River, 2001). According to the viewpoint from Shang and Lin (2005), Customer Relationship Management is a strategic approach that integrates three different important components. These three components are Process, People and Technology. The aim is to maximize the use of each of these components and still to understand the organization's customers, enhance stakeholder value and establish profitable and long-term relationships with customers. Ali and Alshawi (2003) emphasized that the success factors of CRM are in the management, integration, and control of the CRM components. According to Ali and Alshawi (2003) the three major elements that characterize CRM success also are: Technology, People, and Process (including relationships and corporate culture). To be more specific about the components that make a CRM successful, a clear description of each component can be found below:

-Technology: Technology refers to the computer capabilities that allow a company to collect, organise, store and use data about its customers. Technology enables CRM systems to achieve their goals of collecting, classifying and storing valuable customer data (Almoitairi, 2009).

-People: Employees and customers are the key factors in the success of a CRM project. The main objective of CRM is to translate customer information into customized products/services that meet the changing needs of customers in order to build customer loyalty, but full commitment from the organization's staff and management is also mandatory. (Almoitairi, 2009)

-Business processes: CRM is a business strategy and its success requires a change in business processes towards a customer-centric approach. Therefore, all business processes that involve direct and indirect interaction with customers must be analyzed and evaluated (Mendoza et al. 2007)

It is then the alignment of these components within the daily use of CRM which stands out as the key factor to deliver business value using information systems (in the case of this research: CRM)

Batenburg and Versendaal (2004) have developed a framework based on the alignment of the company in the use of a CRM and it is based on two foundations, on the one hand the business dimensions and on the other the CRM areas. Batenburg and Versendaal (2004) separated CRM into 4 areas: CRM strategy, Customer Insight, Customer Contact and Marketing (following Scheper's elaboration of the business IT

alignment approach). The business dimensions are divided into 5 business areas: Strategy, Monitoring and Control, Organization and Processes, Information Technology and Employee & Culture.

In addition to these two foundations (CRM areas and business dimensions), the framework of Batenburg and Versendaal (2004) includes the measurement factors of CRM performance which is divided into three parts: customer retention, customer satisfaction and leverage of sales channels.

These three parts are complementary and define what is called "customer value", which can also be seen as "business value" as performance because the reward and gain of CRM is determined by the number of customers and their buying behavior, also called customer loyalty and satisfaction (Batenburg & Versendaal, 2004).

The authors of this framework state that the balance and fit, with respect to the CRM domains and related business dimensions, will be positively related to the success of an organization in the CRM domain (Batenburg, R., Versendaal, J., 2004).

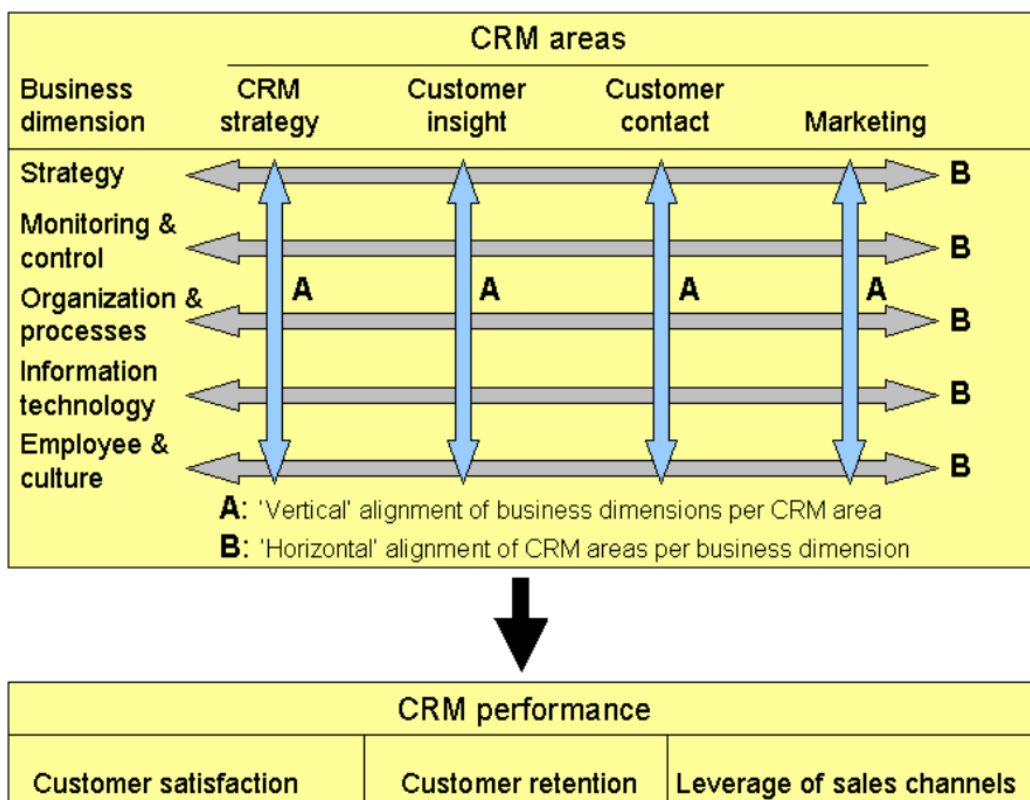


Figure 5: CRM strategic alignment framework, Batenburg and Versendaal (2004)



Perreault et al (2007) stated that technology should not be seen by managers to reduce sales costs (or completely replacing the sales force). They also argued that new sales technology tools are needed to help salespeople develop solutions that meet customers' needs. They support the hypothesis that the use of sales technology to analyze or communicate information has positive mediation effects on the salesperson's performance in building relationships with customers. Indeed, the use of CRM should help salespeople to focus the direction of their activities and improve the scale of their efforts. This is in line with the idea that the usage of CRM tools will have a long-term, strategic and relationship orientation (Rapp, Agnihotri & Forbes, 2008). If a salesperson decides to use the time saved to perform other work-related activities, the use of Sales Force Automation can improve performance. (Rapp, Agnihotri & Forbes, 2008). The use of CRM will have a direct positive impact on sales adaptation. Therefore, both Sales Force Automation-related applications (affecting workload/workload) and CRM-related applications (affecting adaptive sales) will have a positive impact on sales staff's performance and business results. Reinartz, Krafft & Hoyer (2004) found that the higher the level of CRM technology, the stronger the positive relationship between economic performance as well as establishing, maintaining, and terminating customer relationships. Rapp, Agnihotri, and Forbes (2008) found that the use of CRM technology tools not only accelerates regular sales activities, but also helps salespeople build and manage long-term customer relationships. At the same time, sales automation providers (SFA) emphasize that sales representatives who complete routine tasks faster, easier, or better become more efficient (Hunter & Perreault, 2006).

#### 4.2.2 IT Business value

According to Saini, Grewal, and Johnson (2010), the strategic use of CRM reduces the amount of time, effort and resources wasted on salespeople's interactions with B2B buyers. Strategic use of CRM be identifying interesting customer segments to target, planning customer acquisition and retention strategies and making business cases such as calculating the lifetime value of customers.

We can clearly state that several factors play an important role in the success of CRM, such as the extent to which the information generated by the technology is used strategically in creative customer acquisition and retention strategies. (Saini, Grewal &

Johnson, 2010). Expertise and knowledge in CRM information systems technology enables users to extract relevant and timely information, which leads to superior CRM performance, hence the importance of having aligned IT and business departments. Batenburg (2017) hypothesized that CRM performance is positively correlated with the degree of maturity and alignment between the business and IT. There are some types of positions that facilitate this alignment between business and IT departments, such as Business Analyst (the position I am currently holding as an intern for 6 months). Indeed, the Business Analyst works to facilitate communication between organizational subdivisions with the capabilities of their implementation with the help of information technology (Chernysheva et al, 2018). In our daily activities during my internship, we are using the Agile method to monitor the progress of the company's CRM update work. Using this 'Agile' (development method) approach helps the business analyst to constantly review, adapt and adjust priority tasks, tactics, and analytical methods (Chernysheva et al, 2018). Through the example of CRM research, I was able to see the crucial importance of information systems for modern, international companies. Indeed, IT is valuable, offering a wide menu of potential benefits ranging from flexibility and quality improvement to cost reduction and productivity improvement (Melville, Kraemer & Gurbaxani, 2004). The term Business Value of IT is a term often used in the literature to refer to the benefits that IT brings to the business. Indeed, the term "business value of IT" refers to the impact of IT on organizational performance, including improved productivity and profitability, cost reduction, competitive advantage, inventory reduction and other performance measures (Devaraj et al, 2003). However, some authors have defined this Business Value of IT in a different way. For example, Mukhopadhyay et al (1995) refer to the "business value of IT" as "the impact of IT on business performance". Melville et al (2004) defined the business value of IT, in a more detailed way, as the impact of information technology on organizational performance, both at the level of intermediate processes and at the level of the whole organization, and including both the impact on efficiency and the impact on competitiveness. This business value of IT, delivered by competent and well-used information systems, obviously depends on several factors. According to Brynjolfsson et al (2002), the dimensions and extent of the business value of IT depend on a number of factors, including the type of IT, management practices and organizational structure, and the competitive and macroeconomic environment. Other authors such as Hsieh et al (2012) have pointed out that employee satisfaction with organizational information

systems leads to positive work outcomes. This statement simply means that employees who consider their information systems as useful and effective (under the condition that they understand it) in their daily work, leads to better performance of these employees. The Service Profit Chain (SPC) literature has also stated that satisfied employees deliver high quality services that satisfy customers. Heskett and Jones (2004) have also highlighted the importance of IT systems such as CRM in meeting the needs of employees in the performance of their work. Therefore, by improving the major elements of CRM and responding better to the work requirements of employees, it is possible to satisfy users, which leads to the quality of services provided by employees and customer satisfaction. (Hsieh, J., Rai, A., Petter, S., & Zhang, T., 2012).

Interview questions on CRM Performance and Business value	Source
The use of a CRM improves the productivity of salespeople in our organization	<b>Perreault et al (2007)</b>
The use of CRM improves the performance of the salespeople in our organization	<b>Perreault et al (2007)</b>
The use of a CRM utilization helps in cutting down the waste in time, effort, and resources spent in our organization	<b>Saini, Grewal, &amp; Johnson (2010)</b>
The use of the agile method helps to ensure a successful implementation in our organization	<b>Gregorio (2012)</b>
The use of a CRM system decreases the total expenses of our organization	<b>Melville, Kraemer &amp; Gurbaxani, V. 2004)</b>

**Figure 6: questionnaire questions on CRM performance and Business value**

The use of CRM has become commonplace in large, global companies and while it can drive sales, it is primarily a tool designed for long-term salespeople to maintain long-term relationships with customers. Business IT value is produced in the way these

systems are used and the strategic alignment of business and IT services within the CRM. Based on this assumption, I hypothesize:

*H3: CRM performance is positively related to the degree of maturity and alignment between the business and IT*

*H4: CRM performance positively influences the company's success.*

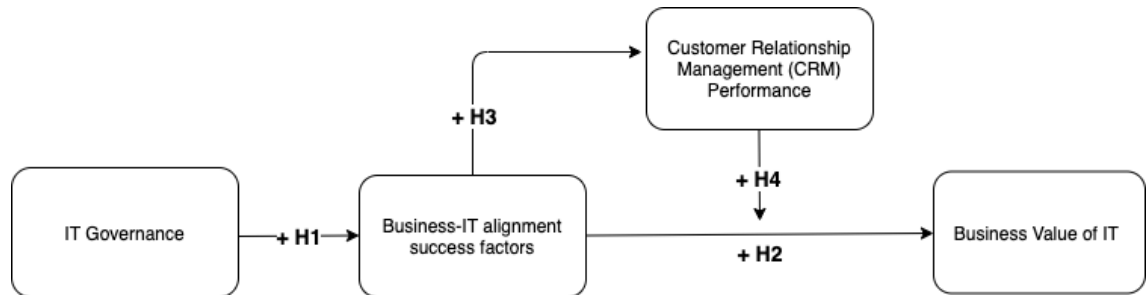
#### 4.2.3 The research model

The research model (figure 7) below is built on the following variables

- IT Governance
- Business IT alignment: success factors
- Customer Relationship Management (CRM) Performance
- Business value of IT

In addition, the research question and sub-problems are represented by the following four hypotheses in the Research model:

- **Hypothesis 1:** good level of IT Governance positively impacts the business-IT alignment.
- **Hypothesis 2:** Business-IT alignment positively impacts the business value of IT
- **Hypothesis 3:** CRM performance is positively related to the Business-IT degree of maturity and alignment
- **Hypothesis 4:** CRM performance positively influences the company's success.



**Figure 7: the 'business-IT alignment within the use of a CRM' research model.**

This research model is based on four constructs: (1) IT governance, (2) Business-IT alignment: success factors, (3) Customer Relationship Management (CRM) Performance and (4) Business value of IT. The four hypotheses appear as follows: (H1), (H2), (H3) and (H4). The coefficients of every one of these hypotheses are required to be positive (+). The variables will be estimated utilizing a survey which depends on the existing literature for each variable.

## 5 METHOD

### 5.1.1 Qualitative research

This thesis expands on the initial findings that suggest that business-IT alignment has a positive correlation on CRM performance and Business value of IT by developing and verifying existing theories that explain human and organizational behavior towards IT in global businesses. In other words, it is a behavioral research and it provides understanding and truth. Indeed, this thesis was done by conducting interpretive qualitative research following closely the instructions contained in the article "publishing a qualitative research" by Smith (1995). This article describes the responsibilities of the researcher, how to conduct interviews and how to report findings.

Being an interpretative researcher is not an easy assignment as it implies interpreting the interpretations of others, hence the importance for the researcher to understand their place. The researcher's tasks consist of collecting sensory data on investigated subject and exploiting them in a particular direction, organizing them and confronting them with hypotheses, previous definitions, and ideas to test them (Smith, 1987). The researcher worked with the people he interviewed on a daily basis, but was only able to meet one of them in person because of the sanitary conditions in the companies this year, as all the employees work from home the vast majority of the time. All the meetings are therefore virtual and still of good quality.

Then, questionnaires and interviews were used as the essential data collection method. By using questionnaires, the researcher can understand the main lines of reasoning of the interviewees and by conducting interviews the researcher can go back and review interviewees perceptions. While conducting the interviews, the questioner did not establish an exacting heading, to permit the interviewees to share their own perspectives. Also, some observations will be made by the daily use of a CRM system and project meeting notes will be taken consistently during my internship.

According to Eisner (1981), there is no fixed form for the communication of results if they are clearly described. The author has exactly stated "What one seeks is not the creation of a code that abides to publicly codified rules, but the creation of an evocative form whose meaning is embedded in the shape of what is expressed" (Eisner, 1981). The reporting style of case of research is at all times considered very important, especially in interpretive case studies. An interpretivist research is not meant to

represent his or her findings as mere facts, as they are essentially the interpretations of other individuals, and thus the justification for the findings needs to be explained quite clearly to gain the credibility of the reader.

### 5.1.2 A global energy company

The case study for this thesis has been made at one of the largest (renewable) energy companies in the world, based on the number of renewable installations around the globe. No further details of the organization will be described to guarantee the confidentiality of the company and its interlocutors. In this study, the company investigated will be called "my internship organization".

The renewable energy sector is booming, as innovation drives down costs while delivering the promise of a clean future in terms of energy creation. The energy created comes from natural sources (mainly sunlight or wind) and is collected by means of receptive installations such as wind turbines and solar panels. The organization of my internship is exclusively a business-to-business company and delivers energy solutions to companies all over the world. The organization of my internship has an IT department in order to use the full potential of the company. During my internship I am working with the Digital Technology, Commercial team. The mission during this internship is to participate in the update of the company's Customer Relationship Management (Re CRM project) in order to deliver a more efficient platform for the company's sales representatives that are using the platform in their daily work, to support the company growth.

### 5.1.3 The Salesforce CRM upgrade project

The interviews are supported by the perceptions and experiences of sales and IT staff who work with the Salesforce CRM platform on an ongoing basis, and more precisely on the update of this platform within the company. Salesforce is a customer relationship management solution that connects companies and customers. It is an integrated CRM platform that provides a single shared view of each customer for all the departments within a company, for instance for my internship organization the platform provides a single shared view to the following departments:

- Sales
- Engineering
- Marketing
- IT

The platform is based on cloud computing technology. According to Microsoft, cloud computing is defined as the provision of IT services, including servers, storage, databases, networks, software, analytics and intelligence, over the Internet ("the cloud") to provide faster innovation, flexible resources and economies of scale. When using Cloud services, users usually only pay for the specific Cloud services they are using and it is helping them to reduce their operating costs, manage their infrastructure more efficiently and scale with their business needs.

Migrating from the previous Salesforce Classic to Salesforce Lightning is not an easy and simple process and it requires months of research, planning, and testing for a company. It is important to point out that, almost half of all CRM projects fail and according to Forrester Research less than 50% of CRM projects fully meet expectations. For an organization to successfully migrate to salesforce lightning, they are some steps that a company can take.

In the case that the current Salesforce platform is performing quite well across an organization, as it is the case for the organization of my internship, it is still important to assess if needs are being met across teams and departments. New needs have potentially developed, and previous needs may no longer be needed.

The best way to conduct a gap analysis is for IT departments to work closely with business departments to better understand which features are essential and how



they fit into their workflows and processes. Indeed, it should be a joint effort between the business and IT departments to find a result that does not hamper productivity. It is important to look at the company workflows and processes at this point to understand what features are critical to the business day-to-day operations. By gathering as much information as possible, conducting a gap analysis of Salesforce Classic and Lightning features will be feasible and done in an efficient way.

As mentioned earlier in this thesis, User Acceptance is one of the important elements for successful business and IT alignment. The same is true when it comes to upgrading a company's CRM system, it is essential to get everyone on board to make the change. I personally participated in the value communication of this CRM change/update, as during this internship, I am giving training to the sales team with the help of slides presentation regarding the changes and improvements present in this new Salesforce Lightning version.

This Salesforce Re CRM project (from Classic to Lightning) is taking almost 2 years to go from analysis to design and to the final delivery. The IT team that I am working with during my internship is following the agile method for this project. It is divided into sprints (that are divided into User Stories) and this consists of following requirements for each component that will be contained in the new Salesforce Lightning platform. According to Muslimah (2018) the Agile methodology (project management process) is a collection of principles that value adaptability and flexibility, it aims to provide better responsiveness to changing business needs and therefore focuses on enabling teams to deliver in workable increments.

#### 5.1.4 Questionnaire and interview

During this thesis, questionnaires and interviews were conducted. For each hypothesis and variable included in the research model of this paper, interviewees were asked to rate their current satisfaction with each variable (“as today” - model as it exists today). Each statement is shown two times in the questionnaire, as in the second time, interviewees are asked to give their opinion on the intended state for the variable (“to be” - model that should be put in place). The difference between the intended situation (“to be”) and the current situation (“as today”) is useful to observe points of improvement, in this case improving the alignment of business and IT services to improve efficiency and performance in the use of CRM.

In this research, several employees participated, they first answered the questionnaire and once all the answers to the questionnaire were collected, individual interviews were conducted with two of the participants to find out more details about the reflections of each employee occupying different positions. Respondents were encouraged to give their inputs on the four statements in this document by answering the below questions. The four open questions below are given to the respondents during the interview process.

- Question 1: what impact do you think IT governance has on business-IT alignment? please elaborate on your answer.
- Question 2: what impact do you think business-IT alignment has on the Business value of IT? Please elaborate your answer.
- Question 3: what impact do you think the Business IT-alignment has on CRM Performance? Please elaborate on your answer.
- Question 4: what influence do you think CRM performance has on the company's success? Please elaborate on your answer.

The employees were introduced to the research model of my paper during the interviews.

#### 5.1.5 Working Method

The questions will be completed by both sales staff and IT staff. During the questionnaires, respondents indicate their level of agreement with a statement, usually in five points: (1) Completely false; (2) False; (3) Neither false nor true; (4) True; (5) Completely true. This is a psychometric response scale that will help to determine the overall employee's viewpoint. Interviewees will give their level of agreement twice for each series of questions, for the actual situation 'as today' and the intended 'to be'. The following two different metrics will be measured:

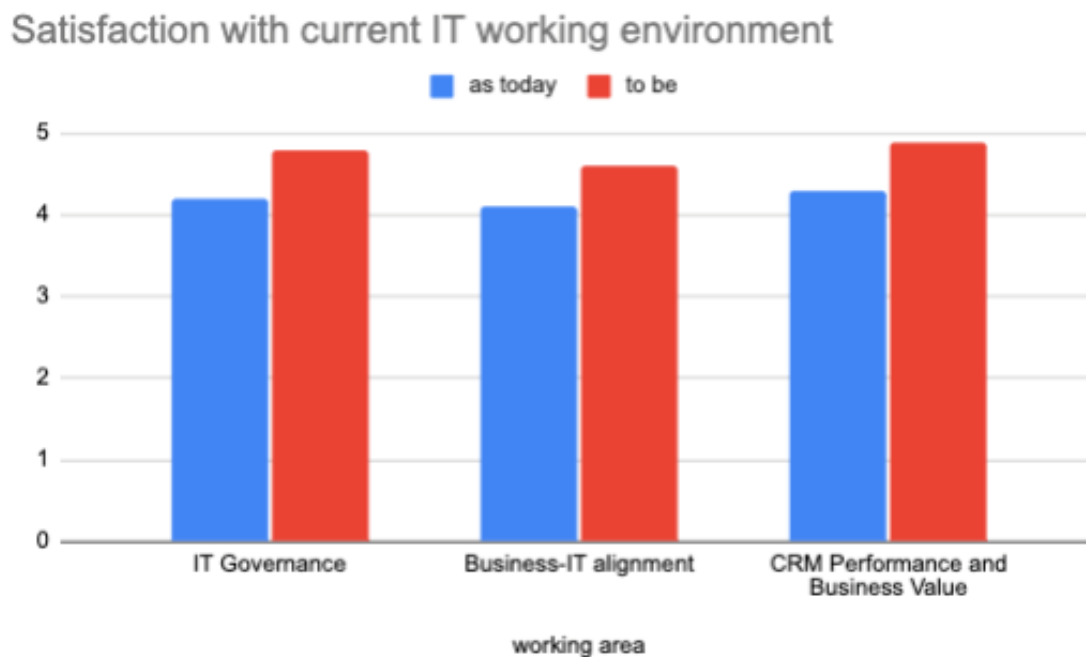
- Satisfaction with current IT working environment: this measure will be used to calculate the difference between the answers given on the current situation "as today" and the answers given on the desired future situation "to be". For example, a difference of 4 between "to be" and "as today" will mean that employees are not satisfied with the current IT working environment. In the other direction, if there is a difference of 1 it means that employees are satisfied with their current IT environment.
- *Current Business IT alignment opinion vs current CRM performance opinion:* this measurement is used to calculate the gap between the responses given to the current "business and IT alignment" block of questions and those given to the current "CRM performance" block that were asked to the employees. For example, by analyzing the answers collected, a CRM performance opinion of 5 and a business IT alignment opinion of 1 would lead to a maximum gap of 4, which would indicate that business IT alignment is not correlated with CRM performance. On the other hand, a gap of only 1 would indicate that business-IT alignment has a strong influence on CRM performance.

Various variables are assessed in the company with the help of the questionnaire. The evaluation of the different hypotheses is based on interviews with the organization's business and IT employees and the interviewees will answer the open questions mentioned above. Due to sanitary reasons this year, all the interviews during this research were conducted by one to one virtual meeting.

## 6 FINDINGS

### 6.1.1 Questionnaire statistics description

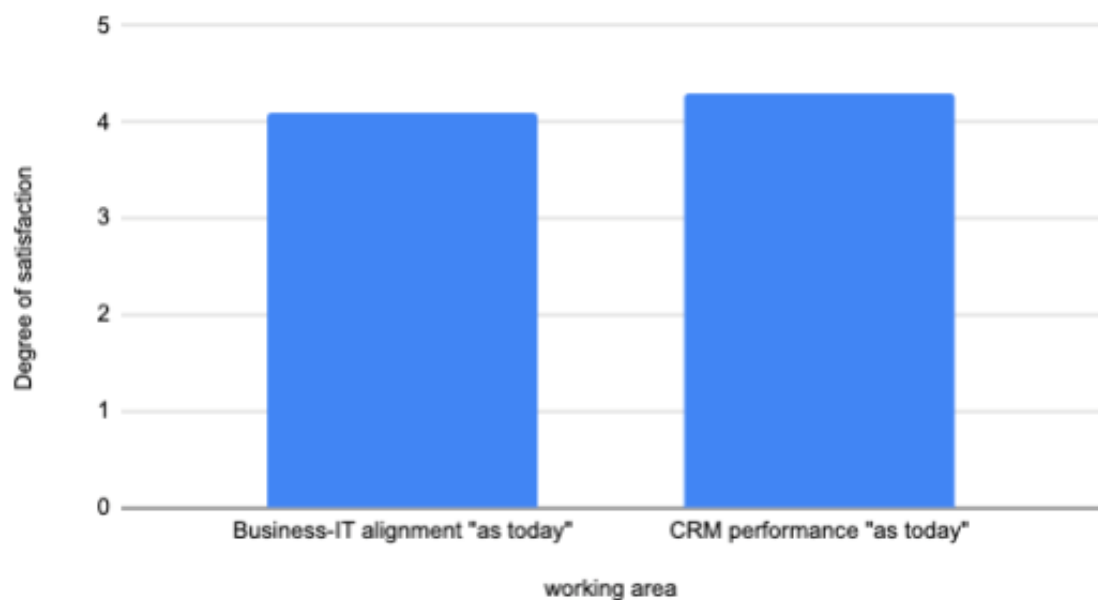
The full questionnaire answered is available in Appendix A. The table 1 gives an overview of the responses to this questionnaire. Specifically, the comparison between the satisfaction of the employees with their current IT environment and their desired level. Even though the current level of satisfaction is lower than the desired level, which represents a general dissatisfaction with the IT environment, this difference is very small (0.57) which indicates that the IT environment is almost as completely as desired for the employees of my internship organization.



**Table 1: satisfaction of employees with current IT working environment**

Table 2 compares only the employees' opinion of the current situation of business-IT alignment and CRM performance in their company. The aim is to zoom in a little more and observe a correlation between today business-IT alignment and today CRM performance according to employees. For both, they obtained a high score from respondents (4.1 vs 4.3) and almost the same score, which already supports one of the hypotheses of my research that business-IT alignment has an impact on CRM performance. Since in the case of my internship organization the level of business-IT alignment is considered to be good/high we can only conclude this way and there is no guarantee that CRM performance will decrease if business-IT alignment decreases even if it would not make sense.

Current Business IT alignment opinion vs current CRM performance



**Table2: Current Business IT alignment opinion vs. current CRM performance perception**

In this part, the findings of the interviews are detailed for each of the previously mentioned hypotheses.

### 6.1.2 Findings on Hypothesis 1

***H1: good level of IT Governance positively impacts the business-IT alignment.***

As explained earlier, the process of updating a company's CRM system is complex. Indeed, all details are important, and everything should be done to facilitate the sales and commercial processes to avoid time wasted and faster those processes. In this type of RE CRM project, IT governance can be useful to ensure that business and IT departments are guided and directed in the right way for a smooth transition. For example, when a sales representative wants to make a change within the CRM system, such as a button or a new feature, they will inform an IT governor (project manager) so that the governor can determine if an organized meeting is necessary. In case of small changes in the CRM that do not require approval, employees from the business and IT departments can also get in touch directly.

*Finding I. IT governance is an important factor in the alignment of business and IT departments:*

During the interviews, the interviewees did not directly mention the importance of IT governance as a facilitator of business and IT alignment. However, even if they did not mention it directly, they mentioned it indirectly by talking about the existence of processes to encourage the cohesion of the different departments in the company (business and IT), which therefore ultimately refers to IT Governance.

*Finding II. IT Governors must understand business needs*

Although during these interviews, interviewees did not specifically mention that the IT governors within their organization were those with the most skills and knowledge within the company, they did indicate that it was important that they fully understood and knew the business needs of the business. According to the project manager of the

salesforce upgrade project, understanding a project and the benefits it should bring to the business is key. When you understand why and how the business will benefit from a project, you act envisioning the final goal to be achieved and you can set appropriate deadlines to make it happen.

### 6.1.3 Findings on Hypothesis 2

#### ***H2: Business-IT alignment positively impacts the business value of IT***

##### *Finding I. Linking IT and business strategies*

During the interviews, employees from the business side and also from the IT side almost all mentioned the importance for the business and IT departments to work as a unity. However, only few of them pointed out the importance of having common strategies between these departments. One of the interviewees mentioned that when departments work with common strategies, the competences and knowledge sharing between the different departments was done in a much more natural way and facilitated. Those who mentioned that having common strategies was important also mentioned that common strategies between business and IT departments is a very important factor for the creation of business value of IT (the definition had been given to them earlier).

##### *Finding III. IT training increases the commitment and performance of employees towards the use of information technology*

During the interviews, I was able to ask each interviewee if specific training was given on a regular basis to ensure that the company guarantees a certain level of IT knowledge and performance to its employees. IT employees sometimes join my internship organization with 10 years of experience and therefore do not necessarily need training. As part of the Re CRM upgrade project, training is given to all employees on the use of the new Salesforce CRM platform, which is always accessible but not mandatory. Otherwise, more general IT-related and mandatory training is given to employees monthly. The business employees all responded that this made them feel more comfortable using the IT tools and the IT employees responded that receiving training

sometimes helped them to understand more quickly and therefore save time in their day to day work. User acceptance was also indirectly mentioned, in particular by IT employees as well as the project manager who stressed that they sometimes have to explain the benefits of IT to the business employees so that they understand and "accept" these tools as a facilitator of business value. For example, before the "go live" - the actual implementation of the new CRM system, a training with several presentations will be given to the business employees to explain the new features of the updated CRM. According to the salesforce project manager, when upgrading a system with new features, it is equally important to make future users understand how it works and why it will be useful, because if they do not use or know how to use the new features, the project will be irrelevant and the employees will be unable to provide any additional business value from the use of the information technology. The general answer here is then that the IT training provided by the company is positively correlated with the company's performance.

*Finding IV. The level of communication between business and IT is positively related to business performance*

One of the elements that also emerged as the most important during the interviews according to the employees questioned was communication. Indeed, whether on the business side or the IT side, one of the factors that emerged as the most important for aligning business and IT strategically was a good level of communication between employees in the different departments. According to some employees, a good level of communication can be achieved, as is the case in my internship company, by setting up recurring meetings on a daily or weekly basis. Important points are not forgotten and are discussed almost automatically during these meetings, which avoids misunderstandings and forgetting to exchange important information. In my internship company, the manager of the CRM update project (IT side) meets every day for an hour with the same sales manager in a virtual meeting to review the work in progress. The manager on the business side gives her feedback and lets him know what needs to be added, removed, or changed in terms of buttons, layout, pages displayed, etc. Regarding the CRM. The CRM upgrade project has not been delivered yet, at the time of writing my thesis so I cannot draw any conclusion here but it is on the right track, as there are no delays and



the business side is quite satisfied for the moment with the work done by the IT side. Good communication between the IT and Business side appears then to be essential in the successful delivery of an IT project, which will be beneficial to the business in general, and is therefore positively correlated with the company performance.

#### 6.1.4 Findings on hypothesis 3

***H3: CRM performance is positively related to the Business-IT degree of maturity and alignment***

Finding I: continuous business-IT alignment within a CRM improves its performance.

As mentioned in the previous hypotheses, the alignment of business and IT departments is positive for the business in general. During the interviews, one of the employees pointed out that within the Re CRM project the business-IT cohesion was beneficial for the delivery of the project. Regular communication during meetings and understanding from both sides is very important for a successful Re CRM upgrade project. He also mentioned that once the project is delivered, to ensure continuous good use of the CRM platform, communication will need to continue between the business and IT departments. Good usage is characterized by salespeople and other employees maximizing the use of the platform by using all the new features available to generate better results. According to one of the interviewees, it is important that the salespeople do not get stuck and that they have people (on the IT side) to turn to if they face a misunderstanding. Business-IT alignment can therefore improve performance related to the use of CRM as long as the alignment process is continuous and does not stop once a CRM or Re CRM project has been delivered.

#### 6.1.5 Findings on hypothesis 4

***H4: CRM performance positively influences the company's success.***

*Finding I. Employees see CRM performance as a positive factor for improving the company's productivity*

All interviewees mentioned that a strong alignment between the company's business and IT departments within the use of CRM and the RE CM project (updating the company's CRM) was an important and positive factor for productivity within the organization. Some employees mentioned that it increased the productivity of their team in which they worked, which benefited from the cohesion and speed of receiving information. Other employees, particularly on the business side, reported increased productivity in terms of sales results. As part of my internship company and their re CRM project, the company wants to add the new features and benefits that come with the latest version of Salesforce. One of the employees gave a little more details during the interviews. This interviewee explained that the cohesion of the Business and IT departments to lead to the success of the CRM upgrade will give the latest features automated where simple tasks would potentially be completed in a short time or without manual assistance which could have a huge positive impact on performance. The employee also pointed out that currently IT employees are spending more time than they should helping other employees facing IT issues or questions. Therefore, the successful implementation of the updated CRM would allow business employees to have less difficulties to use IT in their daily work and the IT department will have more time to focus on more important matters.

*Finding II: Using a good quality CRM improves business performance in an organization*

The CRM upgrade project is not yet delivered at the time of writing my thesis, however, most employees responded that CRM improves the performance of salespeople within their company. The Salesforce Classic CRM platform currently in use within the organization, according to some employees, is already enabling the sales staff to close numerous renewable energy solutions contracts around the world. Further enhancing this CRM with Salesforce Lightning (the new version) by giving salespeople access to additional sales tools to better track and retain their customers over time, increases the

chances that salespeople will close more deals. According to one business employee, there is no reason for salespeople to close fewer deals if the CRM IT platform they use improves. One of the only threats to the decline in sales deals could be the global economic crisis due to the pandemic, which would cause companies to spend less.

*Finding III. Using CRM reduces wasted time and effort*

After interviewing many employees on the business side and also on the IT side, many employees stated that an important reason for upgrading their CRM platform was to reduce time wasting. For example, sales people sometimes use reports to analyze their customer base, but if they are not comfortable using IT tools, they can spend a lot of time on it and still not be able to do an effective analysis. According to many salespeople, improving the CRM platform by making it easier to manipulate and understand (as is the case with Salesforce Lightning - the new Salesforce CRM platform adopted by my internship organization) will then avoid wasting time and allow for more effective analysis. This way salespeople avoid wasting time building reports or trying to understand complicated features and can better focus on tasks that will improve their performance and the company's performance.

#### 6.1.6 Applications for the research question

So, if we move back to the original research question of this research: "How does the cohesion between business and IT in customer relationship management systems affect the business value of information technology? "

When we look at the findings of this research, it is clear that a strong commitment has been given to investigating the relationship between business and IT within CRM and the benefits that this cohesion can bring in terms of the business value of IT. It appears that the second and fourth hypotheses are the most relevant to this research and we can even question whether the other two hypotheses are of real importance to this research. To come back to this statement, business-IT alignment is a component of IT governance. IT Governance is therefore directly related to and strongly influences business-IT alignment and can therefore be considered as the foundation of business IT alignment. This being said, it is not irrelevant in this research to talk about IT governance in order to understand how to best run IT to create a good strategic

alignment. The main drivers of IT alignment within a CRM platform have been discovered in these findings as employees pointed out the important factors to make this alignment happen and to maintain it as a continuous process.

Therefore, if the hypotheses "H1: good level of IT Governance positively impacts the business-IT alignment" and "H3: CRM performance is positively related to the Business-IT degree of maturity and alignment" were no longer to be included in the research, important factors concerning the business-IT alignment in the use of a CRM would be missed. In the first finding part, the application/implementation of a good level of IT governance in a company directly results in a better ability to guide the different departments together in the company on condition that the IT governors correctly understand the business needs. Furthermore, IT governance was found to have a positive correlation with business-IT alignment. Continuous communication between business and IT departments which never stops even after the delivery of a CRM project appeared in the findings to be the most important factor for using the full potential and maximizing the performance of a CRM, so if this hypothesis was not made, this finding would not necessarily have been found.

In conclusion, business IT alignment positively impacts CRM performance in terms of productivity and employee time management. In addition to this, it can be concluded that business IT alignment in combination with a performing CRM impacts the business value of IT, the performance, and the results of a company

## 7 DISCUSSION

### 7.1.1 Existing literature and findings

The drivers during the writing of this research came out from the findings and previous literature as a lot of research on business and IT alignment as well as research on success factors for CRMs has already been done, so I will respond to them correspondingly.

In this section I will only cite elements of the literature that are already part of my research and that do not go in the same direction as my findings during the questionnaire and interview process.

First, Saini et al (2010) mentioned that IT skills were critical for employees who are new to CRM technology. I do not entirely disagree with this author here, but I argue that IT skills were not necessarily cited during the interviews as critical to the use of CRM. The reason is that CRM manufacturers like Salesforce today have made their platform and its functionality easier to use. For example, even in the Re CRM project where we need to change buttons and place features, etc. most of these purely IT changes can be done from the settings or the "Edit Page" function without having to type a line of code. IT skills are always important and the presence of developers in an IT team (working on CRM) is necessary, but I would not define this as critical within the CRM context.

Zoltners et al (2001) described CRM as "the use of technology to manage interactions and transactions with customers". From the questionnaires and interviews conducted, CRM has become a much more comprehensive and enabling tool than a management tool. It improves results and saves time for everyone in the company (business and IT departments). I therefore argue against this definition, which is a too simplistic but also outdated

Hsieh et al (2012) pointed out that employee satisfaction with organizational information systems leads to positive work outcomes. This statement may seem appropriate and I find it difficult to argue against it. However, I did not find any evidence for this in the interview responses. In no statement has an employee mentioned that they are more productive because they are more satisfied with using a CRM platform.

The findings that conflicted with the literature mentioned in this research were rather related to the understanding of the CRM utility. The literature on business-IT alignment

is rather accurate and in line with what I could find in the answers during the interviews. Based on this experience, it is apparent that the alignment of IT and business services has a positive impact on the performance of CRM and the success of the company.

### 7.1.2 The alignment within CRM

This research demonstrates the success factors for strategic alignment within a large organization. In this study, alignment within the Salesforce CRM platform was investigated. It was found that business-IT alignment in CRM is achieved when the business and IT strategies of the company are linked. The interviews were conducted during this research which consisted of understanding everyone's perspectives on the alignment of IT and business services within CRM in order to deliver business value to the company. Slight differences in views were found among employees from different departments. In summary, the use of previous literature and questionnaires, interviews and observations during my internship helped to better understand the implications of this alignment for the creation of business value of IT.

From the beginning of the literature research phase for this paper, the model from Ribbers (2014) made it clear that the management of this business and IT alignment was of crucial importance for IT governance. IT governance reduces the gap between business and IT at every strategic level of the company. Batenburg's (2004) framework on business alignment with the use of CRM was also very interesting as it links each dimension of the business with the different regions of CRM to ultimately lead to CRM performance (in terms of sales results). However, this model appears to be more focused on the strategic business side of CRM. Having interviewed employees about business-IT alignment within a CRM upgrade project, my findings during the interviews were different from what I could learn from this model, although this model is interesting in the value creation process within CRM. Participating in interviews with more sales people working with the CRM platform on a daily basis could have improved our understanding of the strategic alignment of the different regions of the business with the different regions of the CRM (Strategy, Customer insight, Contact, Marketing) and to have more insight into the creation of business value through the CRM.

The authors of this framework assert that balance and alignment, with respect to the CRM domains and related business dimensions, will be positively related to an organization's success in CRM. Not having enough elements in my findings to justify it, I cannot validate or reject this statement from these authors.

To conclude, Little literature has been written about the alignment of business and IT departments within CRM and no research has been found on the alignment of these two departments within a CRM upgrade project. This research with the help of interviews and questionnaires allowed me to investigate this specific scenario further.

### 7.1.3 Limitations

This paper is facing some important limitations in the condition that I would like to validate the research model.

Firstly, the investigation case was only completed in the organization of my internship. Each organization is different depending on its sector of activity (Renewable energy for the company of my internship), its size and the culture of its employees. A company in a different sector will have different customers that are buying different goods/services at different prices and especially at a different frequency (in case of customer retention). For this reason, the findings of this thesis do not justify the benefits of business-IT alignment to any organization in general.

Secondly, although in the interviews we found that business-IT alignment was positively correlated with CRM performance, the employees interviewed are working on a CRM upgrade project and do not necessarily use CRM every day to improve their sales results. Employees on the business side were interviewed but not in sufficient numbers to be able to obtain more details on the business performance side achieved through CRM. So, while CRM may improve productivity and time efficiency of the employees in my internship organization, I cannot make the clear assumption that it improves results.

Thirdly, the Salesforce CRM platform discussed in this research is described in the way it is used in my internship organization. For this reason, the implications of this research cannot be a generalization for the various CRMs that exist. Also, the findings of this research should not go beyond the environment of the company of my internship.

Fourthly, the researcher of this thesis is entirely dependent on the results that he could obtain during the questionnaires and interviews of employees of the internship

company. There is therefore no guarantee that these interview findings will correspond to the overall view on business-IT alignment within a CRM and the creation of business value of IT.

Fifthly, the results of the employee questionnaires depend on the interpretation of the people interviewed and different interpretations can be found among the respondents. The results found are mediated by the interviewer and the observations he had during his role as an intern.

Finally, the descriptive statistics in the first part of the "Findings" are indications of the gaps between the business and IT employees and their perception about CRM. They do not, however, provide strong evidence for the four hypotheses of the research model.



## 8 CONCLUSION

This paper has answered the research question "How does business-IT alignment in an organization using a CRM system affect the business value of information technology?" by using previous literature, observations as well as questionnaires and interviews conducted with employees of an international renewable energy company.

I found that the alignment of IT and business departments within a CRM platform positively impacts the business value of IT in the company in terms of information sharing and productivity. With the right level of alignment, information flows faster, IT staff spend less time providing technical support to sales and can focus more on other important tasks. IT Governance encompasses Business-IT alignment and is an important precondition for successful Business-IT alignment in general.

Future research around this topic should include more sales people being interviewed on the technique of selling using Salesforce CRM. By doing interviews with people working directly with Salesforce who would detail the technology mechanisms to help sell more (such as reports, leads, etc) would also make the research more relevant to detail the levels of alignment within CRM. These new details on alignment within CRM would further extend the framework developed by Batenburg (2004) that maps specific levels of the business to specific levels of the CRM, in order to improve the performance of the platform. Also, I interviewed mainly employees who work within the CRM upgrade project, but they are not people with long years of experience of using CRM daily. In order to better understand the creation of business value of IT using CRM, it would be interesting to interview people with years of experience of CRM for commercial use, and especially people who have experienced different levels of business-IT alignment with examples of bad and good alignments of and how it had reflected the CRM at these points. The case study focuses on business-IT alignment within the context of a CRM should be tested in a company which is in a totally different sector, as it would be of interest to see how this business-IT alignment and CRM is managed by a company totally different to a renewable energy company. The case study concerns the Salesforce CRM environment in a large, international company. To analyze business-IT alignment and its benefits on CRM and the company in a more general way, it would be interesting to look at the same subject of alignment within CRM but in a smaller organization with less international exchange.

The findings of this thesis propose several recommendations for the success factors of business-IT alignment with the use of CRM that can be addressed to managers or more precisely IT governors.

IT governors need to know their company's business needs specifically to implement and drive business-IT alignment. Business needs are different at the local level (of the CRM here for example) and at the central level of the company and managers need to know how to separate this. In the context of the CRM upgrade project, at the local level, the IT team members work very closely with the businesspeople. The respondents of the questionnaires and interviews really emphasized the importance of communication between the IT and business departments. Regular meetings between the two teams are necessary to ensure that nothing is missed in a Re CRM upgrade project. Employees from both departments should also be encouraged to communicate as much as possible outside of these planned meetings (formal) and not hesitate to exchange and build relationships (informal).

Finally, the IT governor needs to know the current IT alignment conditions and its role will be to reduce the Business-IT gap to a minimum as shown in the "Staircase graph" (Ribbers et al., 2014). To put this into practice, an IT governor needs to be aware of the alignment gap between these two departments on each strategic point of the business.

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## 10 APPENDICES

### 10.1 Appendix A: Business-IT alignment in a CRM environment questionnaire

This questionnaire aims to analyse the business-IT alignment in the context of CRM and its impact on the company's performance

Definitions of each component are provided. The questions are based on a five-point Likert scale, where (1) is completely false, and (5) is completely true. The "As Is" questions ask for your opinion on the current state and the "To Be" questions ask for your opinion on the desired state.

The questions are based on past literature research and even though the answers may seem obvious it is important that I get answers in order to build the constructs of my research.

Please, when answering the questions in this questionnaire, consider your own working environment in the context of CRM use (rather than the overall company level). You are under no obligation to answer a question if you feel that you do not have the knowledge to answer it. In this case, please leave the question open

***I will not include your name or your position in the company with your questions in my research, this is only to track who has responded to it when I will be writing my findings***

First block:

Interview questions on IT Governance <b><i>IT Governance</i></b> “Implementation of processes, structures, and relational mechanisms that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of value from IT-enabled investments”					
Question to assess “As today” situation	1	2	3	4	5
Processes to support the business-IT alignment are put in place in our organization					

IT governance plays a crucial role towards the alignment of business and IT departments					
IT Governance leaders understand the needs of their system in our organization					
Question to assess “to be” future situation	1	2	3	4	5
Processes to support the business-IT alignment are put in place in our organization					
IT governance plays a crucial role towards the alignment of business and IT departments					
IT Governance leaders understand the needs of their system in our organization					

## Second block:

Interview questions on Business-IT alignment <b>Business-IT alignment</b> “the unity between implemented IT strategy and the business strategy”					
Question to assess “As today” situation	1	2	3	4	5
Information Technologies support the business strategy and provides value to it					
Business and IT missions, priorities and strategies are linked					
Businesspeople accepted the use of IT as a performance improver					
IT education and training are provided to employees					
Business and IT managers communicate and understand each other					
The level of communication between business and IT departments is great					
There is a planned agenda for communication					
Question to assess “to be” future situation	1	2	3	4	5

Information Technologies support the business strategy and provides value to it					
Business and IT missions, priorities and strategies are linked					
Businesspeople accepted the use of IT as a performance improver					
IT education and training are provided to employees					
Business and IT managers communicate and understand each other					
The level of communication between business and IT departments is great					
There is a planned agenda for communication					

Third block:

Interview questions on Business value of IT <i><b>IT Business value</b> "organizational performance impacts of IT, including productivity enhancement, profitability improvement, cost reduction, competitive advantage, inventory reduction, and other measures of performance"</i>					
Question to assess "As today" situation	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The use of a CRM improves the productivity of salespeople in our organization					
The use of a CRM improves the performance of salespeople in our organization					
The use of a CRM helps in cutting down the waste in time and effort in our organization					
The use of the agile method helps to ensure a successful implementation in our organization					
The use of CRM system decreases the total expenses of our organization					
Question to assess "to be" future situation	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The use of a CRM improves the productivity of salespeople in our organization					



The use of a CRM improves the performance of salespeople in our organization					
The use of a CRM helps in cutting down the waste in time and effort in our organization					
The use of the agile method helps to ensure a successful implementation in our organization					
The use of CRM system decreases the total expenses of our organization					

## 10.2 Appendix B: Business-IT alignment in CRM environment interview open questions provided to interviewees

- Question 1: what impact do you think IT governance has on business-IT alignment? please elaborate on your answer.
- Question 2: what impact do you think business-IT alignment has on the Business value of IT? Please elaborate your answer.
- Question 3: what impact do you think the Business IT-alignment has on CRM Performance? Please elaborate on your answer.
- Question 4: what influence do you think CRM performance has on the company's success? Please elaborate on your answer.

### 10.3 Appendix C: interview with IT project manager

Date: 5 April 2021

Place: audio meeting using the communication software of my internship organization

Attendants: IT project manager, Hugo Biolchini

Interviewer: To begin, I would like to know your opinion on how important IT Governance is?

Interviewee: I think that in our working context IT governance is important especially for the alignment of business and IT because it allows to work to link the interests of both departments to achieve a common goal. It's just sometimes difficult for managers to directly understand some of the technical details of our IT projects as it is the case for the CRM update.

Interviewer: do you mean that managers not working on the technical details of projects may from time to time fail to give the right instructions due to lack of direct understanding of the technical details?

Interviewee: Yes, sometimes managers may not want to change their minds and stick to their ideas, but it is our role as IT project representatives to do everything we can to make them understand the content of our daily work.

Interviewer: In the questionnaire you answered for "IT governance leaders understand the needs of their system in our organization" that the current state is 3 and the desired state is 4. This means that finally they don't have much to improve, could you confirm that?

Interviewee: Correct, in our organization, even if the level of understanding of the managers is never perfect, there is never a big gap in understanding unlike what I have seen in other companies I have worked for.

Interviewer: I see in your answers that the level of communication between IT and business representatives can be improved, could you please elaborate on that?

Interviewee: Yes, it's true that from my point of view, even if we have regular meetings once a day between business representatives and IT representatives, I sometimes have the impression that this is not enough. We often don't have time to discuss all the important points when we're in a meeting and then when the meeting is over, we're each busy with other tasks. I suppose this problem could be solved with a few more employees as business or IT representatives but it's a matter of cost.

Interviewer: Do you have anything to say about the education and training given to employees about IT?

Interviewee: I can say that our organization is one of the ones I've worked for that gives a lot of training and reminds the employees that they must do it regularly. However, there is always room for improvement and little technical information in terms of IT is given in the trainings, so you have to practice to learn.

Interviewer: You are currently working on a CRM project in your organization or more precisely on an update of your CRM, do you think that the CRM in general in your organization allows to increase the productivity of the employees?

Interviewee: This is a difficult question to answer directly, as it is better to rely on usage statistics in front of performance statistics. However, I would tend to say that the CRM in our case is very much used by the sales people for their sales process and that they are helped a lot by this CRM tool to find the right customer in our customer base.

Interviewer: There was no difference found between the current and desired state of using "agile" method in your organization (to reduce waste in time and effort), can you explain why.

Interviewee: It's true, I must say that this is something that we try to do well in this company and that for me can hardly be improved. We use this method on a daily basis to organize our work within the CRM update project.

Interviewer: The definition of business value of IT was given in the questionnaire, can you confirm that once the CRM project is completed and implemented, the company will be able to benefit from the business value of this new IT platform?

Interviewee: I noticed the definition of business value of IT in the questionnaire and it is a good question. The project is not finished yet, so we are not guaranteed that it will be delivered as expected for the moment. However, if it is delivered as expected by the business, it means that it will definitely bring business value of IT.

## 10.4 Appendix D: Interview with one of the business representatives

Date: 7 April 2021

Place: audio meeting using the communication software of my internship organization

Attendants: a business representative, Hugo Biolchini

Interviewer: Firstly, in the questionnaire you answered that the current and desired state were the same for "processes to support business and IT alignment are in place in your organization". Can you tell me why?

Interviewee: Yes, I think there is no improvement to be made on this point within our company, which is really trying to encourage this alignment of the business and IT units. There are frequent meetings between managers to discuss the level of alignment and less formal daily meetings between business and IT representatives to ensure that they are on the same page.

Interviewer: Is the level of alignment between business and IT within the company sufficient? Are the missions, priorities, and strategies well linked?

Interviewee: It's never perfect and there are always areas for improvement between the business and IT departments. There are sometimes misunderstandings on our side as well if IT team members use technical IT terms, but I think we are getting better and the gap is reducing over time, especially if we keep working with the same IT people, which makes us more comfortable on our daily work

Interviewer: On your side, even if you work in the business department, you still need to understand IT functionalities, do you consider that you and your business colleagues receive enough training about IT?

Interviewee: Yes, I find that in our organization training is something taken seriously and even the business team members receive mandatory training. We also have access to non-mandatory trainings which is still good to learn when you don't understand something complicated or too technical. So yes, the training material we get here is enough.

Interviewer: How well do you think business and IT managers communicate and understand each other in your company?

I think that in general we communicate well but there are ups and downs. Sometimes in moments of stress or when we are approaching deadlines, us, the business has to take some radical decisions that may not satisfy the IT staff. For example, if IT people spent time working on a new feature, but it is still not finished, at the approach of the deadline we may decide not to integrate this feature after all. IT members will have lost time, and this can frustrate them.

Interviewer: Can you tell me your opinion on if the CRM implemented in your organization increases the productivity of your salespeople?

Interviewee: All I can say is that in our company, the sales people use our CRM every day and it's a great tool that helps them create reports, and be able to put the right renewable energy solution in front of the right customer at the right time.

Interviewer: You are currently working with the IT team on updating this CRM to provide more functionality, so do you think that the productivity of your salespeople will be even more enhanced after the implementation of the updated CRM?

Interviewee: The project is not finished yet so I can't say yes yet. The main reason why we are doing this CRM upgrade is that we are looking for even better results. With the renewable energy sector looking very promising in the next ten to twenty years, it is important to have IT tools that continue to bring value to the business, and it is important that we can constantly improve.

Interviewer: Do you think on the other hand, besides the increase in performance that CRM can bring to your company, do you think that the CRM also allows to cut costs in your organization?

Interviewee: This is not an easy question to answer. But I would tend to say that especially with the new version of our updated CRM that will be delivered soon, the technical use of the CRM is first of all made easier and it allows the IT team members to have less to help us, the sales people. Fewer IT team members will probably be needed once the new project is implemented.