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**Data Governance and Automated Marketing – A Case Study of Expected
Benefits of Organizing Data Governance in an ICT Company**

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ABSTRACT

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Abstract

This research is looking to find out what benefits employees expect the organization of data governance gains for an organization and how it benefits implementing automated marketing capabilities. Quality and usability of the data are crucial for organizations to meet various business needs. Organizations have more data and technology available what can be utilized for example in automated marketing. Data governance addresses the organization of decision rights and accountabilities for the management of an organization's data assets. With automated marketing it is meant sending a right message, to a right person, at a right time, automatically.

The research is a single case study conducted in Finnish ICT-company. The case company was starting to organize data governance and implementing automated marketing capabilities at the time of the research. Empirical material is interviews of the employees of the case company. Content analysis is used to interpret the interviews in order to find the answers to the research questions. Theoretical framework of the research is derived from the morphology of data governance.

Findings of the research indicate that the employees expect the organization of data governance among others to improve customer experience, to improve sales, to provide abilities to identify individual customer's life-situation, ensure that the handling of the data is according to the regulations and improve operational efficiency. The organization of data governance is expected to solve problems in customer data quality that are currently hindering implementation of automated marketing capabilities.

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Tiivistelmä

Tutkimus tarkastelee työntekijöiden odotuksia data governancen järjestämisen tuomista eduista organisaatiolle sekä miten sen odotetaan hyödyntävän automaattisten markkinointikyvykkyyksien käyttöönottoa. Tiedon laatu ja käytettävyys ovat keskeisiä asioita eri liiketoimintatarpeiden kannalta. Organisaatioilla on enemmän tietoa ja teknologiaa käytettävissä esimerkiksi automaattiseen markkinointiin. Data governance käsittelee päätöksentekooikeuksien ja vastuiden määrittämistä koskien organisaation tietohyödykkeiden hallinnointia. Automaattisella markkinoinnilla tarkoitetaan oikean viestien lähettämistä oikealle henkilölle, oikeaan aikaan, automaattisesti.

Tutkimus on yksittäinen tapaustutkimus Suomalaisessa ICT-yhtiössä. Tutkimuksen aikaan yhtiössä aloitettiin data governancen organisointi ja oltiin ottamassa käyttöön automaattisia markkinointikyvykkyyksiä. Empiirisenä tutkimusmateriaalina on yhtiön työntekijöiden haastatteluja. Sisältöanalyysia käytetään haastattelujen tulkintaan löytääkseen vastaukset tutkimuskysymyksiin. Teoreettinen viitekehys on johdettu morphology of data governancesta.

Tulosten perusteella työntekijät odottavat data governancen organisoinnin muun muassa parantavan asiakaskokemusta, lisäävän myyntiä, lisäävän kyvykkyyttä tunnistaa yksittäisen asiakkaan elämäntilanne, varmistaa että tietoja käsitellään säännösten mukaisesti ja parantavan operatiivista tehokkuutta. Data governancen organisoinnin odotetaan ratkaisevan asiakastiedon laadussa olevia ongelmia, mitkä tällä hetkellä vaikeuttavat automaattisten markkinointikyvykkyyksien käyttöönottoa.

Foreword

Studying in LUT and working at the same time have been both challenging and rewarding. I want to thank all my fellow-students from great times in Lappeenranta and the professors and staff in LUT for making the studying mostly fun and inspiring. My family, friends and colleagues – thanks for bearing with me even at the times when I was somewhat stressed.

There are few people that helped me during my studies and the thesis process who I want especially thank. Turkka, for being supportive and flexible boss during first year of the studies and being an inspiration to start studying. Tiina, for being supportive boss and making it possible to take a leave from work to finalize studies. Examiners Markku and Heidi for giving valuable feedback and guidance. Sami and Erkka, data governance professionals and senior researchers – your feedback was very valuable. Matti and Jerry for your work during the data collection. Jani, Linda, Sonja and Suvi for sharing the ups and downs of the thesis process. Finally thanks to everyone at the case company who participated in this research.

This is it, Kippis!

Juha

Helsinki, September 2015

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1 INTRODUCTION

The quality and usability of data is critical for organizations in order to meet various business needs. These needs are for example related to holistic customer view, single source of truth in reporting, needs of the automated processes and different regulatory issues (Otto 2011a). This thesis looks into how organizing data governance processes for customer data impacts on implementing automated marketing capabilities in a case company that operates in Information and Communications Technology (ICT) sector in Finland. Data governance is a part of Master Data Management (MDM) framework that has been under implementation in the case company. The thesis is looking into what benefits the members of the case company expect to gain from the organization of data governance.

Automated marketing is an important area of development in many companies. For example in a recent article in Finnish business newspaper Kauppalehti, three major Finnish companies describe their views on the automated marketing. According to the article, lot of effort in utilizing the automated marketing capabilities are done but there seems to be uncertainty around how it should be organized. One of the interviewees points out that technology is easy to acquire but changing and renewing the organization's capabilities and skills is much harder task. (Juvonen, 2015)

In this thesis the data governance is looked as an enabler for automated marketing capabilities. Previous study on data governance and automated marketing is studied and by combining these, the empirical data from the case study is analyzed to see does, based on theory and practice, the data governance support implementing automated marketing capabilities.

1.1 Background of the Research

Data governance is topical subject. According to international survey conducted among 200 practitioners of different business areas in 2007, 86 % of the respondents expected the data governance efforts to increase in coming 2 years. Also the survey indicates that over half of the respondents' organizations recognize the data as a strategic asset. (Pierce & al, 2008) There are also available different models for data governance organization. These models define for example roles, responsibilities, goals, decision areas and ownership for data governance activities. (Weber & al, 2009; Kathri & Brown, 2010; Otto, 2011b; Korhonen & al, 2013) Effectiveness of data governance activities over time have also been studied (Otto, 2013) as well as what benefits has been gained by organizing data governance (Otto, 2011c). Also, there is available research on how suitable the data governance models are for small and medium sized businesses. (Begg & Cairn, 2012)

Automated marketing can also be seen as a current topic and there is not so much research available on it. The increased availability of data and technology has leaded the marketing towards automation. Parts of the marketing functions are automated by algorithm-led software that creates targeted marketing actions. (Bacon, 2015) The technology enables companies to target their customers individually with marketing messages, decisions and activities. (Kaufman, 2014) One of the key success factors for automated marketing is to identify what data the company needs to have, store and utilize. The company's ability to act based on the knowledge of the customer is a key element for successful automated marketing. (Hansotia & Rukstales, 2002; Polcari, 2014) Also, the companies need to reduce inconsistency in the customer data in order to increase the customer satisfaction and it has been proposed that integrated customer databases could help achieving it. However, more research is needed on how companies can reduce the inconsistencies in the customer data. (Rangaswamy & Van Bruggen, 2005)

Due to quickly changing business environment in ICT industry and business goals of the case company to increase the value of existing customer base, company has identified many business requirements for customer data management. The company wants to offer smooth service experience in all of its channels of customer interaction, especially in online ecosystem. Services and offerings need to be based on the customer's individual life situation. The company is implementing automated marketing capabilities, which goal is to enable delivery of meaningful messages to individual customer at a right time in order to help achieving better customer experience as well as increase the customer base value in terms of turnover. Also, company has identified a need for unified consumer data standard so, that the customer data can be easily created, modified and utilized throughout the organization and customer's life cycle. By implementing MDM processes, the case company believes it has better possibilities to achieve these goals. The case company where the case study is conducted operates in ICT industry providing telecommunications-, internet- and different online services for both consumer- and corporate customers. Company is market leader in many of the business areas it operates in. This research is conducted in consumer business domain and the thesis focuses in data governance of the consumer customer data and utilization of it in automated marketing.

In previous studies it has been identified that organizations need data governance and management processes in order to meet various business needs regardless of the industry they operate in. Business needs such as business networking, process management, integrated customer management, reporting issues and regulatory compliances affects the whole organization and therefore need to be dealt with organizational level rather than in a specific function of the organization (Falge & al, 2013). Bog (2014) emphasizes that data management has to support all business processes of an organization by providing data across the organizations functions from daily operation to analytical data to support strategic business planning. There is not available research on the combination of the phenomenon of data governance and phenomenon of automated marketing. Also, the data governance has not been studied from the employees' expectations point of view. This thesis aims to fill this research gap by looking how the employees

expect the organization of data governance to benefit in general and how it benefits implementing automated marketing capabilities.

1.2 Research Questions and the Scope

As identified previously, there is not much prior research available on how employees perceive data governance and what benefits are expected from it. Also, there is not available research on where data governance is looked as an enabler specifically for implementing automated marketing capabilities. This thesis is looking to find out what expectations the employees have for organization of data governance. Interpreting the empirical research material, the thesis is looking to find answers to the following research questions.

1. What benefits the employees expect the organization to gain by organizing data governance?

2. How do the employees expect the organization of data governance to benefit implementation of automated marketing capabilities?

The empirical data is interpreted in the light of previous research on data governance and automated marketing. A priori proposition is that by organizing data governance processes, the employees expect an organization to have better means to implemented automated marketing capabilities, because the customer data that is used for automated marketing, is handled in more structured way across the organization.

The technological aspects and requirements of the MDM, data governance and automated marketing capabilities are ruled out of the scope of this thesis. There are numerous providers for technical solutions. For example, many companies like Microsoft, IBM and Oracle offer technical solutions for MDM and companies like Adobe, IBM and Salesforce offer technical solutions for automated marketing. These technical solutions and capabilities are ruled out of the scope of this thesis.

Also, as this thesis focuses on the impacts of implementation of data governance processes in the case company, the other aspects of MDM than data governance are out of the scope of this thesis. The other aspects of MDM are briefly described in the introduction in order to give a comprehensive picture of the subject.

1.3 Literature Review

Because this thesis is looking into what benefits the employees expect from organizing the data governance and how it will benefit the implementation of automated marketing capabilities, the theory in this thesis is focusing on the prior research in the concepts of data governance and automated marketing. The empirical material used in this thesis is looked in the light of available research on both of these concepts.

There is not available commonly agreed definition of data governance but there seems to be consensus that it deals with organizing decision rights and accountabilities for the management of an organization's data assets. Data governance involves different decision areas (Khatri & Brown, 2010), it establishes guidelines throughout whole company for data quality management and is depending on organization specific contingencies (Weber & al, 2009), it defines which decisions needs to made regarding data management and makes these decisions (Otto, 2011a) and it aims to make organizations to realize that data is a valuable asset. (Korhonen & al, 2013)

There are available models for organization of data governance. Three of these models are looked in detail in this thesis. First, the contingency model for organizing data governance is presented. It argues that company specific contingencies affect how the data governance should be organized. Therefore there is no one right way to organize data governance but it should be organized in a way that organization specific contingencies are taken into account. (Weber & al, 2009) Second presented model for organizing data governance is the

morphology of data governance organization. The model's concepts are based on the previous research and it divides organization of data governance into two aspects, data governance goals and data governance structure. Goals refer to reasons why the data governance is organized and structure refers to the organization, responsibilities, roles and decision-making processes. (Otto, 2011b) Lastly a model for organizing data governance in the framework of agile governance model is presented. This model argues that previously presented efforts for organizing data governance focus on the functional domains of the organization and they fail to address the subject across the whole organization's business and IT environments. (Korhonen & al, 2013)

Previous research on the results that have been gained by organizing data governance processes is looked next in order to gain understanding of practical implications of data governance. In 2007 international survey among over 200 practitioners was conducted. The survey was aiming to find out what are the current trends in data governance, what are the focus areas of data governance, how effective these efforts are and the maturity of data governance processes in the participant's organization. The survey revealed that there is no commonly agreed meaning for data governance, customer data is the most common focus area of data governance activities, the activities are led on quite low level of hierarchy in the organizations and level of maturity of these activities is quite low. (Pierce & al, 2008) The concepts presented in the morphology of data governance organization have been tested in six mini-case studies. The case studies display that there are both similarities and differences in real-life context of data governance when compared to presented concepts. Two dimensions of data governance, goals and structure, is visible in all of the cases. Differences are related to decision-making style, involvement of top management and roles in data governance. (Otto, 2011b) Other studies look into business benefits of the data governance and how effectiveness of data governance evolves over time. (Otto, 2011c; Otto, 2013)

Automated marketing as a research area is new. There is not much research available with the explicit term automated marketing, but there are available

research on multichannel marketing (Rangaswamy & Van Bruggen 2005), omnichannel marketing (Polcari, 2014), electronic relationship marketing (Kaupoulas & al, 2002), technologicalship marketing (Zineldin, 2000) and direct marketing (Hansotia & Rukstales 2002). These all look into utilizing company's data assets and technology in order to create meaningful and effective marketing in more or less automated way. This thesis views all of these as automated marketing.

1.4 Research Methodology

The research is done in the real-life context of the case company and the aim is to understand how the members of the company expect the data governance to benefit the company. The empirical research material is interviews. The answers to the research questions are looked to find by using qualitative research method. Representative for qualitative research is that the empirical research material is collected in its' natural, real-life Starting point for qualitative research is not testing a theory or a hypothesis, but to analyze the empirical material in a detailed way aiming to reveal unexpected results. The material is collected using qualitative methods, such as interviews, and the target group for these interviews is appropriately selected. (Hirsijärvi & al, 1996, 155)

This thesis is a single case study conducted in the case company. A case study is an empirical inquiry that investigates a phenomenon in its real-life context and the boundaries between phenomenon and context are not clear. The method is used when the aim is to cover contextual conditions and these conditions are believed to be relevant to the phenomenon at hand. (Yin, 2003, 13) Content analysis is used to interpret the interviews that were selected as an empirical material for this thesis.

The empirical data is interviews of the selected members of the case company. The interviews are part of the MDM work that is done in the case company. Also, as the case company is implementing automated marketing capabilities, the thesis

is looking to find out how the organization of data governance is expected to benefit that. Because it is not possible or meaningful to interview each member of the case company, there was a need for selection of the employees whose interviews are used as an empirical data. Nevertheless, the selection is done in a way that the findings reflect the case company's expectations as comprehensively as possible.

1.5 Structure of the thesis

This thesis consist seven chapters. Figure 1 displays the structure of the thesis.

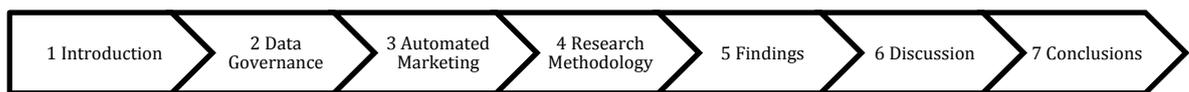


Figure 1: Structure of the Thesis

Introduction chapter describes the theme of the thesis. The chapter outlines the key concepts and the background of the thesis. The research methodology and literature review are presented briefly in the introduction chapter. Also the scope of the thesis is presented in this chapter as well as the definition what thesis is not looking into. Research questions are stated in the introduction chapter.

The second and the third chapters consists the literature review of the thesis. First, the existing research on data governance is presented in chapter two. The concept is looked first in general, then available models for organizing data governance are presented and finally practical implications of data governance from the previous research are looked into. The third chapter looks into existing research on automated marketing and explains what is meant with it in the context of the thesis.

The fourth chapter presents the research methodology, case company and how the empirical case study was conducted. In this chapter the reasoning why qualitative research method, single-case case study and content analysis were

selected as a research methodology is explained. The chapter gives description of the case company and explains how the empirical data was collected and analyzed. The theoretical framework that was used to interpret the empirical data is presented in the chapter four.

In the fifth chapter the findings of the case study are presented objectively. The findings from the empirical data are presented in the light of the theoretical framework. The next chapter, Discussion, compares the findings presented in chapter five to the previous research and presents the answers to the research questions.

Finally in the conclusions chapter the whole thesis is reflected. It gives summarized answers to the research questions and looks the implications of the thesis from managerial and theoretical points view. In the critical appraisal part of the thesis the limitations of the research are discussed and propositions for further research are presented.

1.6 Key concepts

Master Data Management (MDM) has not commonly agreed definition. White & al (2006, 3) defines MDM:

“MDM is a workflow-driven process in which business units and IT collaborate to harmonize, cleanse, publish and protect common information assets that must be shared across the enterprise. MDM ensures the consistency, accuracy, stewardship and accountability for the core information of the enterprise”

In the case company MDM is defined as a collection of best data management practices that orchestrates how business and IT work together in order to ensure the uniformity, accuracy, stewardship, consistency and accountability of the enterprise's core data assets. The case company sees that MDM is 80% about people and processes and 20% about technology. MDM includes Data Governance, Data Standards, Data Quality, Data Management and Information

Management Systems (IT). In following paragraphs key terms of this thesis are briefly described what they mean in the context of this thesis.

Data Governance is an organizational approach that makes data management policies and processes around data management formal. It aims to make organizations to see data as a valuable asset. (Korhonen & al, 2013) Data Governance creates guidelines through the whole organization for data quality management, defines roles and responsibilities, involves both business and IT stakeholders and makes sure that data governance activities are in compliance with organization's strategy. (Weber & al, 2009)

Data Standards are based on data principles that links the data and business goals, sets the rules and boundaries for the uses of data and this way sets the organization's standards for data quality. (Khatri & Brown, 2010) Here, data standards are seen as agreed-upon set of specifications for master data in the company. It explains how data and common business terms are named, stored, exchanged, formatted and presented throughout the company.

Data Quality addresses such issues as accuracy, timeliness, completeness and credibility of the data. Accuracy means whether the data is correct in the light of its intended use. Timeliness looks if the data is up to date for the purpose it serves. Completeness refers whether all needed values are recorded and credibility looks into the trustworthiness of the source and the content of the data itself. (Khatri & Brown, 2010) As a summary, data quality measures how well the data serves its intended purpose.

Data Management makes sure that the decisions defined by data governance are turned into meaningful actions. When data governance defines responsibilities and what actions regarding organization's data assets needs to be done, data management makes these actions. (Otto, 2011a)

Automated marketing in a simple definition means sending the right message to the right customer at the right time automatically. (NZ Marketing Magazine, 2015)

With automated marketing capabilities, in the context of this thesis, is meant organization's capability to target marketing and customer communications automatically triggered by some change in the customer relationship or in the customer's behavior. These changes result in some kind of change in the customer data and this change acts as a trigger for automated marketing or automated communication action. This also acts as bridge between data governance and automated marketing capabilities. The automated marketing, in the scope of this thesis, looks into capabilities of utilization the customer data for automated marketing actions. Therefore the data governance is looked as an enabler for the utilization of customer data.

2 DATA GOVERNANCE

This chapter describes the previous research done in the area of data governance. It starts with the description of what is meant with data governance. The second part of the chapter outlines how data governance could be organized based on the previous research. Last part of chapter looks into the practical implications of the subject. In the last part topics such as what it is the current state of data governance, what has been achieved with data governance and how previous research looks in the light of this thesis are covered.

Data Governance as a research area is quite new. There is not one commonly agreed definition for Data Governance, however there are similarities in the definitions. It is defined to be a set of decision-making processes for the maximization of an organization's data assets. Because organizations have different business needs, priorities, goals and perspectives, these decision - making processes can vary from very informal and undocumented approach to a structured, formal and documented form. (Pierce & al, 2008, 7). One way to define data governance is to see it as an organizational approach that makes policies and processes around data management formal for the full life cycle of data, from creation to use and to removal. Data governance aims to make organizations to realize that the data is a valuable asset. (Korhonen & al, 2013, 11)

Weber & al (2009, 1) defines that Data Governance establishes guidelines through the whole company for data quality management, defines roles and responsibilities for decision making areas for these roles, involves both business and IT stakeholders and makes sure that these activities are in compliance with organizations strategy. (Weber & al, 2009, 2). The contingency model for data governance that Weber & al (2009) have created is described in more detail in chapter 2.1.

Khatri & Brown (2010) define data governance as a definition of decision rights and accountabilities for decision-making about organization's data assets. Viewing

data as an asset means that it has some kind of value or potential value and brings or potentially brings business value to the organization. Data governance includes five related decision domains: Data principles, Data quality, Metadata, Data access and Data lifecycle. Data principles set the direction for other decision domains and they should create the linkage between the data and the business goals. As the data principles set the rules and boundaries for the uses of the data, this sets the organization's standards for data quality. Such issues as accuracy, timeliness, completeness and credibility of the data are addressed. These data quality dimensions are basis for metadata, which refers to information of the data, describing what the data is to help in interpreting the meaning of the data. Data access addresses issues how data is accessed and who can use the data. It takes into account that needed business areas have access to the data they need. Data lifecycle defines how data is created, used and when the data becomes obsolete and needs to be destroyed. (Khatri & Brown, 2010, 149-151)

There can be distinguished differences in data governance and data management as well as the relation of the two. Governance refers to who in the organization has rights to decide the standards for data quality. Management involves deciding how these standards are employed for data quality. (Khatri & Brown, 2010, 148) Further, Data governance is a leading function of data management, by defining which decisions needs to done regarding data management and makes these decisions. Data management makes sure these decisions are made and turned into meaningful actions. (Otto, 2011a) Figure 2 summarizes the fundamental concepts of the data governance and also outlines the difference between data management and data governance.

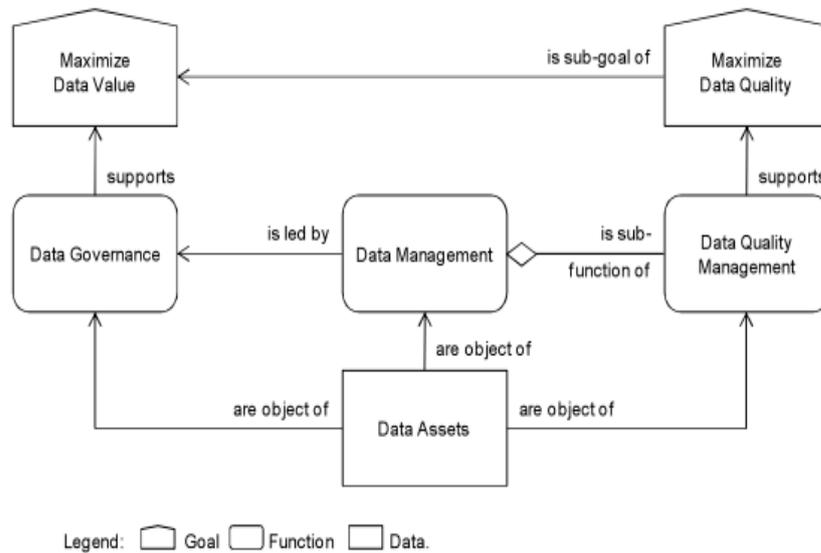


Figure 2: Fundamental Concepts of Data Governance (Otto, 2011a)

According to an international research that was conducted in 2007 among practitioners in different business areas. Even in the same organization there are different terms when referring to the activities related to governing information or data assets. Data governance is seen complicated as it has to address multiple issues how to organize the activities related data governance and how to motivate the organization members to do these activities. People who are responsible of the data governance activities must specify the goals they are aiming to achieve with data governance and work systematically towards those goals. The research also indicates that in the organizations where the data governance programs have been in place longer, those organizations get synergy benefits and have better means of treat data as an asset. (Pierce & al, 2008, 35)

This chapter described the concept of data governance and definitions that are available. Even though there is not commonly agreed definition available, there seems to be consensus that data governance deals with organizing decision rights and accountabilities for the management of the organizations data assets. In the next chapter the aspect of organizing the data governance is looked in more detail.

2.1 Organization of Data Governance

As this thesis looks to find answer what are the employees' expectations of the benefits from data governance in general and in implementing automated marketing capabilities, it is necessary to understand what is meant with organizing data governance. The chapter describes available models for organizing data governance and different aspects these models propose to be taken into account.

2.1.1 The Contingency Model for Organizing Data Governance

One of the proposed models for organizing data governance suggests that contingencies affect on how it should be organized. By contingencies it is meant that data governance should be configured company-specific way by taking into account special characteristics of a given company. To meet this need, a flexible model for data governance that includes roles, decision areas and responsibilities has been presented. The identified contingencies that affect on organizing data governance are competitive strategy, diversification breadth, organizational structure, competitive strategy, process harmonization, market regulation and decision-making style. This approach to data governance suggests that each company needs a specific data governance configuration that meets the company's context. This also suggests that there is no one-way of organizing data governance instead the organizing of data governance needs always to take into account the company-specific contingencies listed previously. (Weber & al, 2009, 3)

The flexible model for organizing data governance by taking into account organization specific contingencies includes definition of roles and responsibilities in data governance and it addresses horizontally through the organization issues regarding strategy, organization and information systems. This is bound together by defining assignment of responsibilities to these roles. There are four roles and one committee in data governance model presented by Weber & al (2009). The roles are executive sponsor, chief steward, business data steward and technical

data steward. The committee is data quality board. Table 1 describes these roles in more detail. (Weber & al, 2009, 9-13)

Role	Description of responsibilities	Organizational placement
Data Quality Board	Defines the data governance framework and looks over it's implementation	Committee including business and IT representation as well as roles defined here
Executive Sponsor	Oversight and sponsorship for data governance, strategic direction of the activities	Senior manager, for example Chief Executive Officer, Chief Information Officer
Chief Data Steward	Transforms the Data Quality Board's decisions in actions	Senior manager with data management background
Business Data Steward	Details for data quality standards for his/her area of expertise	Professional from business unit
Technical Data Steward	Provides technical definitions for data standards and explains how data flows through the IT systems in the organization	Professional from IT unit

Table 1: The Roles in Data Governance (Weber & al, 2009, 11)

When designing data governance in a given organization, the model consists of three main areas. These are the roles, the decision areas and tasks related to data governance. These can be designed by using matrix presented in Table XY. For each task, the definition of the roles and the nature of the role can be defined by using this matrix. The roles assigned to given task can be Responsible, Accountable, Consulted or Informed. The rows indicate key tasks and decision areas and the columns represent the roles. (Weber & al, 2009, 9-12)

	Role 1	Role 2	Role 3	Role n
Task 1	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/
Task 2	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/
Task 3	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/
Task n	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/	Responsible/ Accountable/ Consulted/ Informed/

Table 2: Matrix for Assigning the Roles and Main Decision Areas and Tasks in Data Governance (Weber & al, 2009, 9)

By using the matrix presented in Table 2, the assignment of responsibilities in data governance can be done. Responsible means that the role is responsible of executing the given task. Accountable means that the role has overall accountability of that task and gives authorization for the task. Consulted stands for the role that must or may be consulted in a given task before it is done and informed means that the role must or may be informed of the outcome or affects of a given task. (Weber & al, 2009, 12-13)

In addition to the assignment of the roles, responsibilities and activities described in the previous paragraphs, the model presented by Weber & al (2009) takes into account three horizontal perspectives. These perspectives are strategy, organization and information systems. The strategy perspective links data governance and data quality management to organization's business goals and strategic objectives. Strategy should also include the business case for data governance. Organization perspective takes into account the roles and responsibilities as well as ownership of data and data related processes.

Information systems perspective addresses issues regarding organization wide data architecture and information system support.

When applying this model for organizing data governance in practice, the company specific situation and contingencies needs to be taken into account. To help doing this, the model has two design parameters namely Organizational structuring of data quality management activities and Coordination of decision-making for data quality management activities. First of the design parameters directs to find out right balance between centralized and decentralized data governance. If the data governance is strictly centralized, all decision authority is in the hands of chief steward or data quality board and the decisions are organization wide. In a strict decentralized data governance the decision authority is in the hands of business- and technical data stewards. In decentralized model the data quality board gives more recommendations than makes decisions. (Weber & al, 2009, 13-15) Also, the balance between centralized and decentralized organization of data governance can be vary between decision areas within the same organization. For example, the data principles could be decided in centralized way by the data quality board and the decisions related to data quality could be in the hands of the business- or technical data stewards in more decentralized manner. (Kathri & Brown, 2010, 151-152)

The second design parameter, Coordination of decision-making for data quality management actions, finds the balance between hierarchical and cooperative data governance. In the hierarchical data governance, the decisions are made top down and a single role has the authority to make decisions. In the cooperative data governance, no single role has the authority for decision-making. The model applies formal and informal mechanisms to reach the decisions. In order for organization of the data governance to be successful, all these previously described factors need to be designed in order to fit the given company's special characteristics. The company-specific contingencies and how well they have been taken into account in the designing the data governance, affect how successful it will be. (Weber & al, 2009, 13-15)

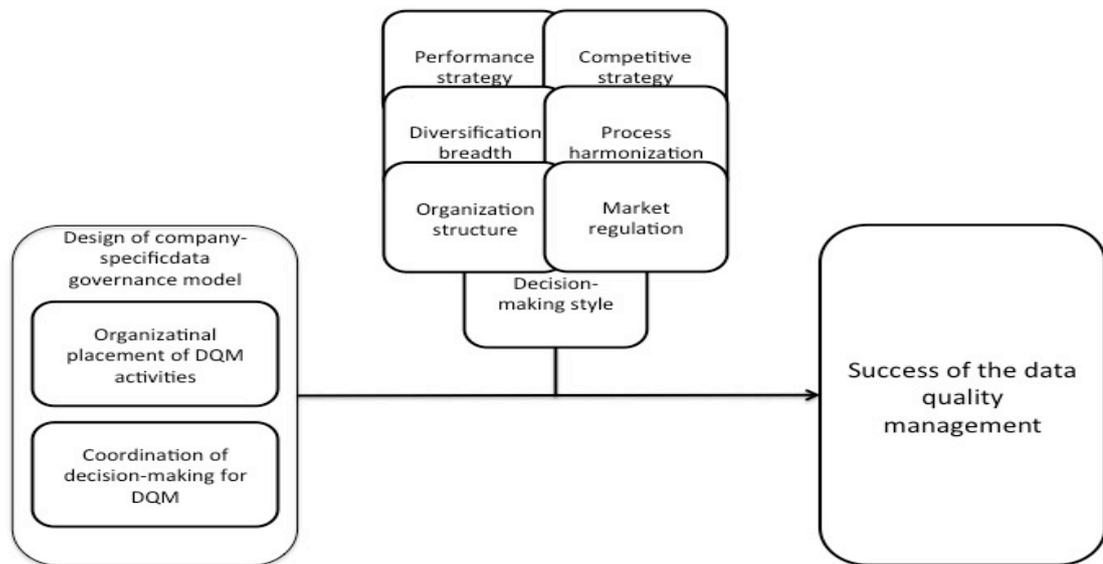


Figure 3: Contingency Model for Data Governance (Weber & al, 2009, 17)

Figure 3 summarizes the contingency model for data governance. It outlines that the success of data quality management is depending on how well the contingencies have been taken into account, when designing company-specific data governance model. (Weber & al, 2009). This model argues that data governance is always company-specific and it is affected by both internal- and external factors.

Further, based on the research done in two telecommunications companies, BT and Deutsche Telekom, Otto (2011c) proposes that there are more contingencies that affect the organization of data governance. External contingencies are the company size, the industry it operates in, volatility of the markets and how much the organization is operating in the area of business-to-consumer. Internal contingencies include allocation of the decision rights for data governance, overall awareness of the subject within the organization, general organizational structure, how harmonized the business processes are and the landscape of information systems. (Otto, 2011c, 61.)

2.1.2 The Morphology for Data Governance Organization

These previously described models give an outline how data governance could be organized from the organization perspective (Weber & al, 2009; Otto, 2011c) and from the perspective of the different decision areas (Khatri & Brown, 2010). There is also available more general framework for organizing data governance. Otto (2011b) has created morphology for data governance, which combines the aspects from the previous research and provides a framework for organizing data governance for further research as well as for the practitioners. Figure 4 summarizes the morphology for data governance organization. Morphology means structuring and arranging parts of the object to create a whole and description of the structure and relation of phenomena that has only few scientific results available so far. (Otto, 2011b).

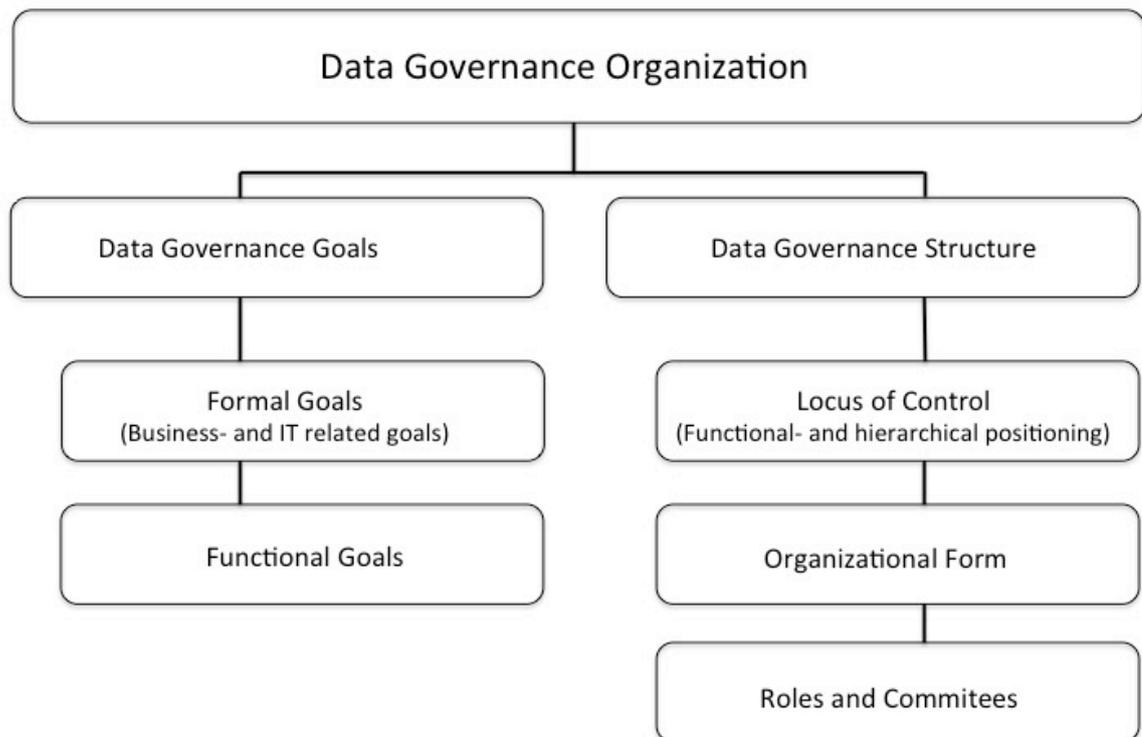


Figure 4: The Morphology for Data Governance Organization (Otto, 2011b)

The morphology for data governance organization has two dimensions as displayed in Figure 4. First of the dimensions is the data governance goals, which are divided in formal goals and functional goals. First of these, the formal goals, are measurable and they describe the effectiveness and success of data governance. They are divided into business goals and IT goals. In the previous research the most common business goal for data governance is to ensure the compliance of data with the rules and regulations. Other goals are to enable decision-making, improve customer satisfaction, to increase operational efficiency and support business integration. The most common IT related formal goals in the morphology of data governance organization are to increase the quality of data and support information system integration for example in the case of migrations. The functional goals are related to the decision areas for which the data governance specifies the rights and responsibilities. These goals are to create data strategy and policies, establish data quality controlling through quality metrics, establish data stewardship, implement data standards and metadata management, establish data life-cycle management and establish data architecture management. (Otto, 2011b)

Second dimension refers to the structure of the organization of data governance. It is divided into locus of control, organizational form and roles and committees. First of these defines the responsibility of data governance in the organization. It has two aspects, functional positioning and hierarchical positioning. Some views see that the functional positioning should be in business departments and others that it should be more located within the IT departments. Quite often also shared responsibility between the two is suggested as the way to proceed. Hierarchical positioning refers to how high in the organization's hierarchy the locus of control for data governance should be located. There is not available common view on this, but the previous research suggests that it should be located in the both executive and middle management levels of the organization. The second dimension of the organization, the organizational form, deals with the subjects of centralized and decentralized decision-making. Also in this area, there is not available commonly agreed view based on the previous research, the organizational form should be decided depending on the characteristics of the

organization at hand. The roles and committees define different roles that need to be involved in data governance. Most commonly agreed roles are executive level sponsor, data governance council, data owners and data stewards. The executive level sponsor gives the mandate for data governance across the organization. Data governance council typically balances between interests of different stakeholders in data management and makes the organization wide decisions. Data owners are accountable and responsible of the defined data, where as data stewards provide the rules and develop the data. (Otto, 2011b)

2.1.3 Data Governance in the Agile Governance Model Framework

The morphology for data governance organization is based on the research that has been published before 04/2011 (Otto, 2011b). When repeating similar search in academic databases now 4 years later in 04/2015, there are available more recent studies about organizing data governance. Korhonen & al (2013) looks the subject from accountability point of view. They argue that organization have to choose the right people in data management roles and give them authority to perform data governance activities throughout the organization and also to tie these people's performance to their compensation and incentives. Organizational issues are seen more critical to the success of data governance than technical aspects. (Korhonen & al, 2013, 11).

In order to better meet accountability aspect, the organizing of decision rights and responsibilities in data management, the model for organizing data governance in the framework of agile governance model has been created. Authors of this model argue that previously presented efforts for organizing data governance focus on the functional domains of the organization and operations are led several levels below executive management. For this reason they fail to address the subject across the whole organization's business and IT environments. (Korhonen & al, 2013, 11-12)

The agile governance model is a general model for governance and Korhonen & al (2013) presents it in the context of data governance. The model contains five

levels of decision areas and each area is viewed in two dimensions, effectiveness and efficiency. Former of the dimensions refers to organization’s capability to achieve the desired goals. It can be also expressed as doing the right things. Efficiency dimension refers to capability of optimizing the available resources, in other words doing things right. Levels in the model are strategic steering, strategic implementation, tactical, operational and day-to-day. (Korhonen & al, 2013, 12-13)

Level	Data Governance Roles	
	Effectiveness	Efficiency
Strategic Steering	Executive sponsor	
Strategic Implementation	Data Governance Council, Chief Steward	Data Stewardship Steering Committee, Coordinating Data Stewards
Tactical	Data Governance Office, Data Stewardship Facilitators	Data Stewardship Team, Business Data Stewards
Operational	Data Architects	Technical Data Stewards
Day-to-Day	Database Administrators, Integration Specialists	Data Analysts, Analytics Developers, Report Developers

Table 3: Data Governance in the Agile Governance Model Framework (Korhonen & al, 2013)

Table 3 displays the roles assigned to different decision levels in data governance in effectiveness and efficiency dimensions in the agile governance model framework. It shows that commonly in previous research suggested (Weber & al 2009; Otto 2011a; Korhonen & al 2013) five roles in data governance, namely executive sponsor, data governance council, chief data steward, business data steward and technical data steward, are not addressing all data governance related decisions and operating areas comprehensively enough.

On the strategic steering level operates the executive sponsor. This role should be a member of the top management of the organization and the sponsor enables data governance program to have organization-wide scope. The sponsor provides funding and is responsible of defining mission for data strategy and policies. This should provide guidance for next levels of the model to turn the strategy and policies into concrete actions. Strategic steering level has planning horizon of five

years or more. The person in this position should have high credibility within the organization and should have a drive and an ability to achieve changes through data governance. The executive sponsor needs to have enough authority for long-term decision-making concerning the whole organization. (Korhonen & al, 2013, 13-14)

Strategic implementation in this model consists organization-wide coordination and strategic decision-making. Data governance council facilitated by chief data steward has organization-wide authority over data management issues that are closer related to the implementation. The council's responsibility is to translate the strategic guidelines provided by the executive sponsor into meaningful actions. The data governance council consist business- and IT-leaders and the data stewards. The chief data steward has an important role in coordinating the work of the council as well as putting the decisions made by the council into actions. This person should have strong leadership and communication skills and ability to address both business- and IT-related issues in order to make data governance effective. This organization-wide coordination regards to effectiveness dimension of the agile governance model, addressing the aspect of doing the right things. For strategic decision-making, the model suggests that data governance council launches data steward steering committees to support and oversee the implementation of the data management activities. These committees should steer and support the work of the data stewards on the given activity as well as review and approve for example changes and suggested data models. This function addresses the efficiency, doing the things right and using available resources efficiently. (Korhonen & al, 2013, 14)

Tactical level of the model includes domain coordination and tactical decision-making. For the coordination of the data governance activities the model suggest organizing a data governance office, which facilitates data stewards by helping them in scheduling, announcing and organizing meetings for example. In the tactical decision-making business data stewards play key role. They are accountable for definitions regarding data on their business domain. Person in this role needs to understand the importance of the data and has to be able to

transform business strategy into data tactics that enable to achieve the business goals. The business data steward has to be able to operate across business- and IT teams throughout the whole organization. (Korhonen & al, 2013, 15)

On the operational level, such roles as data architects are responsible of the operational planning, addressing the effectiveness aspect of doing right things. The technical data stewards are responsible of operational decision-making, acting as a counter parts for business data stewards by transforming the business requirements into technical activities. The model suggests that when business data steward is a tactical role, technical data steward is an operational role. The last level in the model is day-to-day, which is also viewed in two dimensions, operational support and operations. Operational support consists of roles like database administrators and integration specialists. These roles support people working on the operations, such as data analyst and report developer. On this level there is no governance work since the activities are guided by the targets set on the levels above. (Korhonen & al, 2013, 15)

The agile model for data governance argues that five most common roles defined in previous research may not be enough in order to achieve well-balanced data governance model that addresses issues throughout the organization. In the mapping displayed in the Table 3, it can be seen that roles regarding efficiency aspect at the strategic implementation level, roles regarding effectiveness aspect at the tactical and operational levels and roles concerning day-to-day activities are not identified in previous research. Also, the model helps to demonstrate the positions within the organization of the different data governance roles. (Korhonen & al, 2013, 16) This model also focuses on the human aspect of the data governance roles. It defines what kind of characteristics and abilities persons on different key roles should have as well as how they should be positioned and viewed within the organization.

As these previously described models for organizing data governance implicate, it is an organization-wide task that has multiple dimensions that need to be taken into account. As a summary, it involves specification of the roles (Weber & al

2009; Otto 2011a & 2011b; Korhonen & al 2013), it needs to take into account organization-specific contingencies (Weber & al, 2009), it needs to address different decision areas (Khatri & Brown, 2010), the goals for data governance needs to be defined (Otto, 2011b) and data governance activities needs to be specified on all levels of the organization (Korhonen & al, 2013).

Previously described models give theoretical frameworks how data governance could be organized and what aspects should be taken into account, but do not shed light into the benefits what has been achieved with these efforts. Next chapter looks into available research about current state of data governance in practice and the results that have been gained with these efforts.

2.2 Practical Implications of Data Governance

Previously, the basic concept of data governance and models how organizations could organize it has been described. This part looks into available results what has been gained with organizing data governance and how organizations currently see the concept. In the context of this thesis, these available results are looked in the light of expectations of the case company in the discussion chapter of the thesis.

International Association for Information and Data Quality (IAIDQ) and University of Arkansas at Little Rock (UALR-IQ) jointly conducted a survey to find out current state of data governance in different organizations in 2007. The survey was global and had over 200 participants. The results of the survey was aiming to find out what are the current trends in data governance, in what are the focus areas of data governance, how effective these efforts are and the maturity of data governance processes in the participant's organization. (Pierce & al, 2008.)

The survey indicates that data governance does not have commonly agreed meaning. People use different names to describe same data governance activities and people use same names to describe different activities in both between the

different organizations and within the same organization. The most common terms used for activities related governing organization's data assets were data management, data governance, data stewardship and information management. Majority sees the data as strategic asset and feels that it is managed accordingly. There seems to be link between how much potential in data is seen and how well it is managed. In 2007 when the survey was conducted, 56 % of the organizations were either evaluating different options for data governance or planning on starting the first implementations. Only 9 % responded that their organization have had data governance processes in place more than two years. Most of the participants (86 %) believed that their organization is going to increase data governance efforts either significantly or some-what in the next two years after the survey. (Pierce & al, 2008, 11-16.)

To understand what organizations try to achieve with data governance efforts, the survey aimed to find out what is the focus of these efforts currently. Customer data is the most commonly in focus for data governance actions, 70 % of the respondents indicated that. The survey showed that data governance efforts are focused on a broad range of data, other areas that were commonly mentioned are financial data (58 %), products and production (47 %), services (42 %) and sales (36 %). The main objectives for data governance according to the survey are to improve data quality, establish clear decision-making processes, increase value of data, provide data-related problem solving mechanisms and involve also business people to data related decision-making instead of only IT-people. The motivating factors for data governance were similar, most commonly mentioned was the improvement of data quality. The main data governance activities were standardization of data definitions across the organization, providing common strategies and policies, supporting data warehouse and business intelligence activities and defining business rules across the organization. Interesting area that was mentioned many times, even though it was not a selectable answering option in the survey, was providing single view of customer. (Pierce & al, 2008, 17-21.)

When respondents were asked to indicate the involvement of the top management in the data governance efforts, the survey shows that in most cases the data

governance is positioned fairly low in the hierarchy of the organization (Pierce & al, 2008, 25). This is in contrast of the theories presented in previous chapter, where the involvement of the executive sponsor is seen important part of the organizing the data governance.

Lastly the survey aimed to measure maturity of data governance activities in the organizations. Maturity was measured on three different aspects: 1. Employee responsibility and accountability for data governance, 2. The status of goal setting and measurements for data governance and 3. The status of processes and policies for data governance. The maturity was measured on a five levels based on how respondents see the current status of the three aspects in their organization, 1. Ad-Hoc, 2. Repeatable, 3. Defined, 4. Managed and 5. Optimized. Majority of the respondents indicated that their organization is on early phases in employee responsibility and accountability, goal setting and processes of data governance by selecting one of the first three levels of maturity. Still, the survey shows as the organization moves in maturity to next level, for example from ad-hoc to repeatable, significant results with data governance efforts are achieved. On the third aspect, the status of processes and policies for data governance, the significant results are gained when organization moves to the third level of maturity, defined. (Pierce & al, 2008, 30-35.)

This survey conducted by IAIDQ and UALR-IQ in 2007 and reported by Pierce & al in 2008 shows that data governance activities are implemented or planned to be implemented in the near future in many organizations. It also shows that data governance efforts cover wide range of organization's data assets. According to the survey, there seems to be contrast in organizing the data governance between practice and theory. The survey indicates that data governance activities are led several levels below the top management and the theories presented in the previous chapter emphasize the importance of the top management's involvement. During the time of the survey, most respondents indicated that the maturity of data governance efforts is on the low levels but nevertheless these efforts are seen useful. The results of the survey can be interpreted as reliable, since there were over 200 participants from wide range of business- and geographical areas. Since

the majority respondents expected data governance efforts to increase during next two years, it would be interesting to see the results from similar research now 8 years later. Based on the results of this survey and assumption that the efforts really have increased, the results regarding especially maturity and results of data governance efforts should be different.

To test the Morphology of Data Governance in the real life context of the phenomena, six mini case studies were conducted to find out current situation of organizing data governance in selected organizations. Table 4 displays the results from these case studies. (Otto, 2011b)

Case	Data Governance Goals		Data Governance Structure		
	Formal Goals	Functional Goals	Locus of Control	Org. Form	Roles, Committees
1.	No formal quantified goals; DQ index and data lifecycle time measured	DQ, data lifecycle, data arch., software tools, training	Business (IM and SCM) 3rd level	Central MDM dept., virtual global organization	MDM council, data owners, lead steward, technical steward
2.	No formal quantified goals	Business: Data definitions, ownership, lifecycle, data arch., IS/IT: Data models, IT arch, projects DQ.	Business (Corporate Accounting) 3rd level	Central project organization, virtual organization	Steering committee, master data owner, master data officer
3.	No formal quantified goals, data lifecycle time measured, SLAs with internal customers planned	Ownership, Data lifecycle, DQ, service level management, project support	Business (Shared service centre) 4th level	Central data management organization, virtual global organization	DG manager, DQ manager, data owner, data stewardship manager, data steward
4.	Alignment with business strategic goals, no quantification	DQ standards & rules, DQ measuring, ownership, data models and arch., audits	Hybrid (Both central IT and business) 3rd and 4th level	Central organization, supported by projects	"Data responsible", data architect, data manager, DQ manager
5.	Alignment with business drivers, formalization through SLAs	Data strategy, rules and standards, ownership, DQ assurance, data & system arch.	Business (shared service centre) 4th level	Shared service	Head of MDM, data owners, lead stewards, regional MDM heads, data architect
6.	No formal quantified goals	MDM strategy, monitoring, organization, processes, data arch., system arch., application dev	IS/IT, 3rd level	Central organization, supported by projects	Head of MDM, data owners, DG council, data architect

Key: DG = Data Governance; Org = Organizational; DQ = Data Quality; arch. = architecture; IM = Information Management; SCM = Supply Chain Management; MDM = Master Data Management; dept. = department; IS = Information Systems; IT = Information Technology; SLA = Service Level Agreement

Table 4: Critical Appraisal of the Morphology of Data Governance through Case Studies (Otto, 2011b)

The six case studies presented in table xx display both similarities and differences between the cases analyzed and the concepts developed in the morphology of data governance. The two dimensions of the morphology of data governance,

goals and structure, can be found in the real life context in the cases analyzed. In all of these cases, data governance is located on third or fourth level of management. They all have similar functional goals and the structure of data governance organization is centralized. Also the differences between the concepts in the morphology of data governance and analyzed cases can be found. Only the case number 4 indicates direct relation between business strategic goals and data governance, even though the data governance is considered to have significant business impact. The goals that can be found are related to data quality and service level agreements (SLAs). One difference is in the data governance organization. In all of the cases the organization model is quite centralized, where as in the literature quite often the balance between centralized and decentralized model is referred. Another difference from the literature and these case studies is the involvement of the executive management. None of the analyzed cases had executive management involved in the data governance, although in the literature it is considered important in order to succeed in data governance. Finally, there is a difference in the establishment of committees for data governance. Three out of six cases do not have committee for data governance, for example data governance council, although the importance of the committees is also stressed in the literature. (Otto, 2011b).

The organizing of data governance has been analyzed in two major telecommunications companies, BT and Deutsche Telekom. Both of these companies were able to gain significant business benefits by organizing data governance through improved data quality and process efficiency. Based on the case analysis, it is proposed that there is no one right way of organizing data governance but it is depending on internal and external contingency factors. Also, the case analysis proposes that the allocation of decision rights related to data governance and organizations overall awareness of the topic are determining factors for the success of these activities. If the allocation of decision rights is located in business function, the gained benefits from data governance are more likely to be seen as a result of data governance. Where as, if the decision rights are located in IT department, the linkage between business benefits and data governance is not so strong. (Otto, 2011c.)

In another case study, the effectiveness and evolvement of data governance over time has been investigated. The case study was conducted in American company Johnson & Johnson. The effectiveness of data governance is measured with the ratio of how many of data quality management actions are preventive versus the reactive actions. The company was able to change this ratio from 20 % to 80 % within the period of 2008 to 2011 by implementing data governance processes. In this case, the trigger for establishing data governance came from outside the company. 2008 Johnson & Johnson received a customer complaint caused by poor data quality. Because the complaint came from outside the company, it was considered important enough to start implementing changes. (Otto, 2013.)

In Johnson & Johnson case, the responsibilities for data governance were assigned to single department. This helped the company to start to see the data as company-wide asset. By starting to monitor the quality of data on a daily basis, the company is able to see impacts of business events, such as migrations, to data quality and this way prepare better for future business events. Also, by monitoring and measuring the data quality and it's positive development, it has provided visibility to data governance's positive impact on the data quality. More over, it has helped the organization to see that it is meaningful to allocate resources to data governance over significant period of time. This case study argues that data governance is a dynamic capability that evolves over time. It can be seen as a mean to respond to changes in the markets the organization operates in. In Johnson & Johnson case, this change was the negative customer feedback received in 2008. (Otto, 2013.)

These previously presented examples demonstrate that there is available research on the practical implications of data governance. There is quite comprehensive research of current status of data governance in different organizations at 2007 (Pierce & al, 2008). Otto (2011b; 2011c; 2013) has done case studies around business benefits of the data governance, the organization of it and how effectiveness of data governance evolves over time. These studies do not look the subject from the business expectations or the marketing point of view. In the

survey for the current status of data governance, the respondents were asked to whom the leader of data governance efforts reports, only 5 % mentioned marketing as one of the reported party (Pierce & al, 2008, 24). This thesis aims to provide information about the expectations of the benefits gained with data governance as well as the benefits for automated marketing capabilities.

Next chapter looks into automated marketing and what it meant with the subject in the context of this thesis. The chapter provides visibility how the two main subjects of the thesis, data governance and automated marketing, are related to each other.

3 AUTOMATED MARKETING

In the previous chapters the concept of data governance was presented in general, from organizing point of view and what kind of practical implications are available. Since this thesis is also looking to answer what benefits for automated marketing are expected from data governance, this chapter defines what is meant with automated marketing. In this thesis the data governance is looked as an enabler for automated marketing capabilities. Previous research on data governance and automated marketing is studied and by combining these, the empirical data from the case study is analyzed to see what benefits the business is expecting from data governance in general and for implementing automated marketing capabilities.

3.1 Definition and Related Research

To begin with, the automated marketing needs to be defined. Nathalie Morris, managing director of Ubiquity, gives a simple, yet holistic definition of automated marketing in recent article about marketing technology “Put it simply, it’s sending the right message, to the right person, at the right time – automatically.” (NZ Marketing Magazine, 2015) Nowadays there is more technology and data available for companies and this growing dependence of data and technology means that marketing is becoming more automated. Marketing functions are shifting to automated algorithm-led software to create targeted marketing and customer communication actions. (Bacon, 2015). Current technology enables targeting each customer directly and individually with marketing message, decision or activity. (Kaufman, 2014)

Even though, there is not much previous research available on automated marketing, there are available research, papers and articles about multichannel marketing (Rangaswamy & Van Bruggen 2005), omnichannel marketing (Polcari, 2014), electronic relationship marketing (Kaupoulas & al, 2002), technologicalship marketing (Zineldin, 2000) and direct marketing (Hansotia & Rukstales 2002).

These all address the issue of utilizing company's data assets and technology in order to create meaningful and effective marketing in more or less automated way. Here all these concepts are viewed as automated marketing.

It has been identified that one of the key challenges in implementing automated marketing capabilities in multichannel environment is related to what kind of data companies need to have, store and utilize in order to have integrated view of customer. (Hansotia & Rukstales, 2002) Polcari (2014) states that company's ability to act based on the knowledge of the customer is one of the key elements for successful automated marketing. Company has to be able to store and utilize the customer data in different channels of interaction to develop the marketing from one-way communication to conversation. Both of these papers emphasize the importance of the data and utilization of it, but they do not cover the aspect how the management of the data should be organized.

Like in data governance, also in automated marketing the organization of decision rights and communication between different parts of the organization is important. When automated marketing is taking place in different channels of customer interaction, it is likely that the marketing department is not having control over these communications. Companies should pay attention in organizing this in a way, that the communication is consistent across the channels. Organization should support cross-company communication. (Polcari, 2104). Marketing and management needs to be aware of the technological development and the capabilities it brings to communication and coordination. (Zineldi, 2000) Many organizations are not structured in a way to provide the customers unified experience across different channels. The channels are managed in different parts of the organization and no one has overall responsibility to ensure unified communication and marketing actions across the channels. (Rangaswamy & Van Bruggen, 2005) This can be seen as a need for organization wide coordination, marketing needs to work in tight cooperation with IT as well as different channels of customer interaction in order utilize and manage the resources effectively.

The inconsistency of data across different channels can cause customer dissatisfaction. If a customer receives different information in a company's web page and from a salesperson, this could have negative affect on customer satisfaction. One proposition to reduce inconsistency and customer dissatisfaction is to integrate organization's customer databases. Many organizations do not have answers what information these integrated databases should contain and therefore it is important that marketing is involved in design process. There is an identified need for further research on which inconsistencies affect the most to customer satisfaction and what organizations can do to overcome these inconsistencies. (Rangaswamy & Van Bruggen, 2005.)

3.2 Automated Marketing in the Context of the Thesis

In this thesis the automated marketing is viewed as marketing actions that are triggered by the rules that utilize the organization's data assets. Figure 5 displays an overview of automated marketing in the context of this thesis. The first section represents organization's data assets. These can be customer data, product data, contract data or any other kind of data that can be used for marketing purposes. The middle section of the figure stands for marketing strategies and –rules. These are based on the overall strategy and the business goals of the organization. The rules are defined using some kind of software. For example, the rules can be based on customer data. An example of a marketing rule is “if customer's address changes to an area where company in selling new products, send a letter to customer to promote these products.” These rules and strategies trigger marketing- or customer communication actions, which are the third part of the overview. Depending on the rules and customer interactions, the actions can be digital or physical. For example, company's CRM system can display a message to sales person about an offer when the sales person looks for customer information. On similar manner based on the rules, customer may be contacted with a sms, a phone call or an e-mail message.

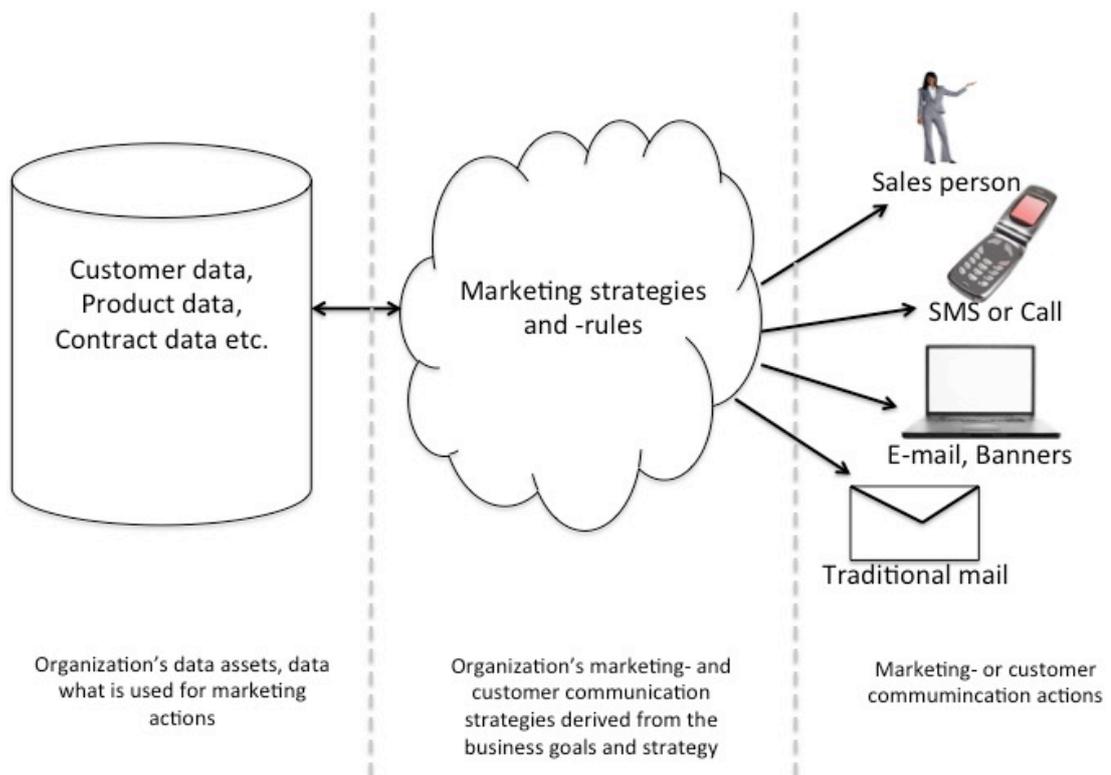


Figure 5: Overview of Automated Marketing

As this thesis looking to answer what are the employees expectations of the benefits of organizing data governance and how the data governance is expected to benefit implementing automated marketing, the scope is focusing on the first part of the Figure 5. The expected benefits are viewed in the light of how data governance processes are expected to improve case company's capabilities for implementing automated marketing actions.

Automated marketing is an important area of development in many companies. For example in a recent article in Finnish business newspaper Kauppalehti, three major Finnish companies describe their views on the automated marketing. According to the article, lot of effort in utilizing the automated marketing capabilities are done but there seems to be uncertainty around how it should be organized. One of the interviewees points out that technology is easy to acquire

but changing and renewing the organization's capabilities and skills is much harder task. (Juvonen, 2015.)

This chapter gave brief overview of automated marketing. It outlined the concept and gave a picture how automated marketing is viewed in the scope of this thesis. Previous studies around the concept of automated marketing agree that it is related to utilization of company's data assets and delivering meaningful marketing action to the right customer at the right time. Also it has been identified that integrating the organization's customer databases could increase customer satisfaction and make the automated marketing more effective and that it needs more research. (Rangaswamy & Van Bruggen, 2005) In the next chapter the research methodology, case company and empirical data are presented.

4 RESEARCH METHODOLOGY

This chapter presents the research methodology, the description of the case company, description of the empirical data and the theoretical framework used to interpret the empirical data.

This research is looking to answer the research questions what are the employees' expectations of the benefits from organization of data governance and what benefits for automated marketing is expected to gain by implementing data governance processes. The phenomenon of interest is the data governance and the employees' expectations for it. The research is done in the real-life context of the case company and the aim is to understand how the members of the company expect the data governance to benefit the company. The empirical research material is interviews. The answers to the research questions are looked to find by using qualitative research method.

Representative for qualitative research is that the empirical research material is collected in its' natural, real-life context and that the data collection is done by human as opposed to some technical instrument. Starting point for qualitative research is not testing a theory or a hypothesis, but to analyze the empirical material in a detailed way aiming to reveal unexpected results. The material is collected using qualitative methods, such as interviews, and the target group for these interviews is appropriately selected. (Hirsijärvi & al, 1996, 155).

In qualitative research the empirical research material is looked in the light of specific theoretical framework (Alasuutari 1999, 40). In this thesis there were interviews conducted in the case company regarding members' of the organization view on the current state of managing consumer customer data. These interviews are looked in the light of data governance and how does data governance, if it would exist, enable implementing automated marketing capabilities.

The research methodology for this thesis is a single case study conducted in the case company. A case study is an empirical inquiry that investigates a

phenomenon in its real-life context and the boundaries between phenomenon and context are not clear. The method is used when the aim is to cover contextual conditions and these conditions are believed to be relevant to the phenomenon at hand. (Yin, 2003, 13.)

Typically case study provides detailed information of the phenomenon in a single case or small group of interconnected cases. The unit of analysis is an individual, group or community. The area of the interest in case studies are often processes and the phenomenon is studied in its natural context. (Hirsijärvi & al, 1996, 123.)

The employees' expectations of the benefits of organizing data governance are the case that is studied in this thesis. As discussed in chapter 2, the organizing of data governance is contextual and depending on organization specific contingencies (Weber & al, 2009). The case company is under implementation of MDM processes and the empiric data used in the thesis was collected in a project that was conducted in the case company to find out current status of customer data processes. This thesis looks into real-life context of the case company and it is expected that the current situation in the case company is relevant to phenomenon that the case study is looking into.

Yin (2003) states that there are five rationalities that justify selecting single case study as a research design. These rationalities are (1) if the case represents critical case, (2) the case is extreme or unique, (3) the case is representative or typical, (4) it is revelatory case or (5) the case study is longitudinal. Critical case is at hand when a theory that has specified clear set of propositions and circumstances within the propositions are believed to be true is tested in practice. A second rationale, the case being extreme or critical, occurs commonly in medical sciences when a specific injury or disorder could be so rare that it is worth of documenting and analyzing. Thirdly, the single case can be opposite to the previous by being representative or typical. In these cases the study may represent for example typical project in a typical firm of a given industry segment. The results and lessons learned would be believed to be informative about the experiences of the average firm in that industry. A Fourth rationale is the

revelatory case. This situation occurs when the analyzed phenomenon has been previously inaccessible to scientific investigation. Finally, a fifth rationale for single case study is the longitudinal case. This is the case when the same single case is studied at different points in time and the interest is to find out how some factors change over time. (Yin, 2003, 39-42).

The reason for selecting single-case case study for research design in this thesis comes from two previously explained rationalities. Firstly, the case is representative and typical for companies in ICT industry that offer services and products for consumer customers and handle customer data. Second rationale is this being a revelatory case. The case company is in new situation because they are planning on implementing data governance processes. As this thesis is seeking to find out expectations of the benefits of data governance, this would not be possible at different point of time. Before the decision of implementing data governance processes, the members of the company could not have similar expectations. Also, if the case study would be done at the later point of time when the data governance processes would be in place, most likely the expectations would be different. Therefore the situation and the phenomena have not been previously and will not be later available for scientific research.

Interviews of the members of the case company are the empirical material used in this thesis. Content analysis is used to interpret these interviews. It has been stated that content analysis is one of the most important research techniques in social sciences. Analyzing text in the context where they are used distinguishes content analysis from other methods. (Krippendorff, 2004, xii) Content analysis is a way to organize the empirical data in order to do conclusions. It provides descriptive information about the subject of research and the conclusions require researchers theoretical thinking. (Grönfors, 1982, 161)

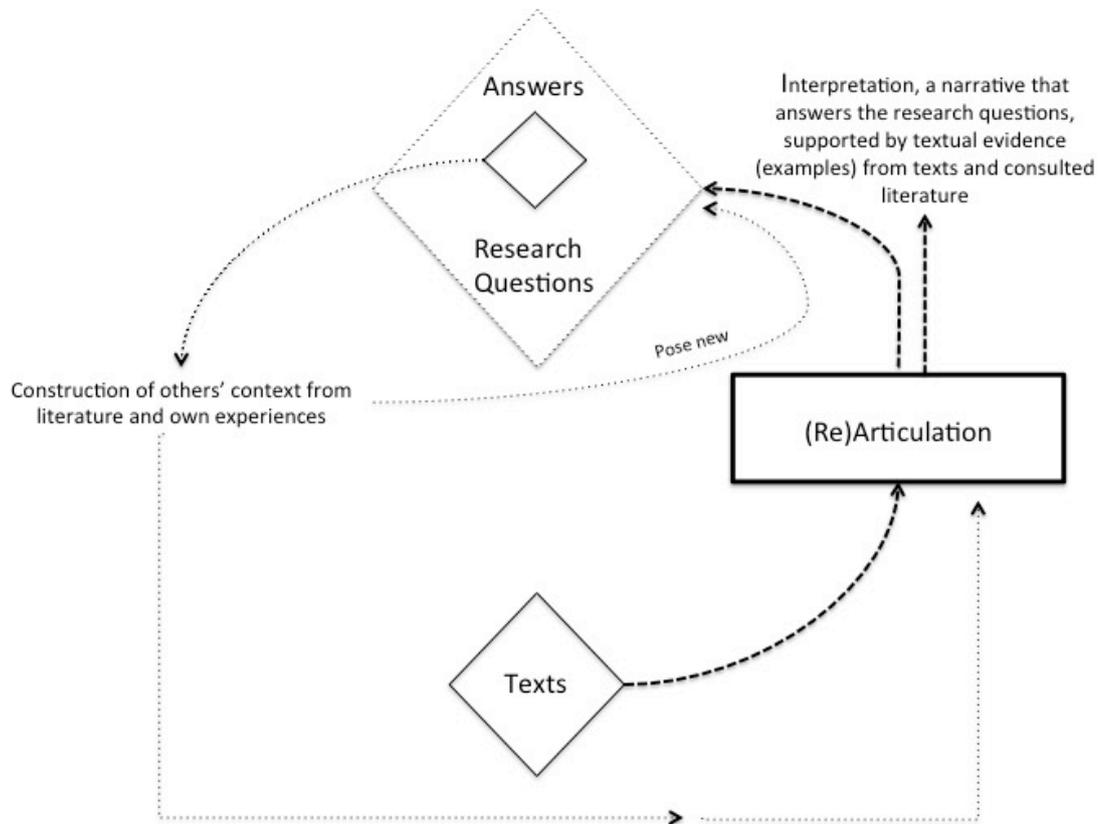


Figure 6: Qualitative Content Analysis (Krippendorff, 2004, 89)

Figure 6 displays the framework for qualitative content analysis presented by Krippendorff (2004). The researcher constructs the context for the analysis, taking into account the worlds of others, when finding answers to the research questions and in the adoption of analytical constructs based on the available literature and prior research about the contexts of the texts in hand. (Krippendorff, 2004, 89).

In this thesis, the texts are the interviews that were transcribed into textual format. The context and the phenomena is the data governance and what benefits the case company is expecting from it. The texts are interpreted in the light of theoretical framework that is based on the prior research. This interpretation is supported with examples from the empirical material and the previous research on data governance and automated marketing presented in chapters 2 and 3. Answers to research questions are sought through this interpretation.

4.1 Case company

Data governance is a part of Master Data Management (MDM) framework that has been under implementation in the case company. The case company operates in ICT industry providing telecommunications-, internet- and different online services for both consumer- and corporate customers. Company is market leader in many of the business areas it operates in. This research is conducted in consumer business domain and the thesis focuses in data governance of the consumer customer data and utilization of it in automated marketing.

Due to quickly changing business environment in ICT industry and business goals of the case company to increase the value of existing customer base, company has identified many business requirements for customer data management. The company wants to offer smooth customer experience in all channels, especially in online ecosystem. Services and offerings need to be based on consumer's individual life situation. The company is implementing automated marketing capabilities, which goal is to enable delivery of meaningful messages to individual customer at a right time in order to help achieving better customer experience as well as increase the customer base value in terms of turnover. Also, company has identified a need for unified consumer data standard so, that the customer data can be easily created, modified and utilized throughout the organization and customer's life cycle.

It has been agreed with the case company to keep the company anonymous. Also, all the empirical data has been agreed to handle anonymously in a way that no connection to an individual or to the case company can be made. For this reason the description of the case company is not given in more detail.

4.2 Empirical Data

Generally in case studies, there are six common sources of evidence. These are direct observation, interviews, archival records, documentation, participant-observation and physical artifacts. (Yin, 2012, 10) One of the most important sources of evidence for case studies is an interview. They are usually open-ended interviews, which means that the respondents are asked facts about the phenomenon as well as their opinions about it. Interviews can also be focused interviews, where a certain set of questions is asked based on the research strategy and commonly they are combination of the two types of interviews. (Yin, 2003, 85-92) In this case study interviews are used as a source of information.

4.2.1 Data Collection and Data Selection

The empirical research was done during November and December 2014. In total 25 interviews were conducted and 49 members of the case company participated in these interviews. Duration of the interviews varied from 30 minutes to an hour. In the 30 minutes interviews there were one responded and the longer ones were group interviews having 2, 3 or four respondents at the time. The respondents were from different units and hierarchical levels of the case company.

The interviews were open-ended interviews but the respondents were informed about the theme of the interview beforehand. The interviews were performed by two consultants and the author of the thesis as a group interviews. Each interview was recorded and a summary of the findings was written after the interview. The theme of the interviews was to find out organization member's current view and understanding of the ways customer data is handled within the case company. The interviews were part of MDM work in the case company. The aim of the interviews was to gain as holistic as possible view on the current state of handling of customer data and possible problems in it. The complete list of interviews conducted during MDM work in the case company is presented in the Appendix 1.

Four out of these 25 available interviews were selected for empirical material because they were identified as key informants for the purpose of this thesis and the saturation was achieved with these. Key informants are often critical for success of the case study. In addition to providing valuable information of the matter that is investigated, they can often suggest other sources of evidence. (Yin, 2003, 90) Saturation means that there is enough empirical material for the purpose of the research. There is enough material, when the same issues start to come up in the material. The saturation has been reached at this point. (Hirsijärvi & al, 1996, 169) Total of 8 persons from the case company participated in the selected four interviews. The selection is the interviews of Vice President of Marketing, Vice President of Business Unit A, a group interview of 2 Senior Business Analysts from the Business Analytics and a group interview of the Data Manager and 3 Customer Data Analysts. Although there were 25 interviews of total 49 informants available, the same issues started to come up in the interviews. The selected four interviews of 8 informants are providing information related to the research questions and therefore were considered to be enough for the purpose of the thesis.

The Vice President of Marketing has overall responsibility of marketing and customer communications development. She initiated the MDM work that is in progress in the case company and is a member of the senior management board. The Vice President's unit is responsible of the implementation of the automated marketing capabilities. Business unit A of the case company is the largest business unit in terms of turnover, customers and employees. Compared to another business units, this unit has longer history and has more experience in dealing with customer data. Therefore the unit's Vice President's interview was selected for detailed analysis.

Whereas the two Vice Presidents were selected to provide strategic perspective to the case, two other interviews selected for detailed analysis were based to gain also operative insight. The Senior Business Analysts from the business analytics department are providing analytical information for example about the customers to the top management and to different business units. They have insight to what

the business is expecting from the data and what is the overall situation of the utilization of the customer data. Also, the analysts were able to provide valuable information about the key persons in the case company that should be interviewed. The Data Manager and the Customer Data Analysts are responsible of the implementation of automated marketing capabilities as well as overall utilization of customer data for the needs of sales, marketing and customer communications. This interview was selected because the respondents are dealing with customer data on a daily basis and they have insight on the issues that are currently causing problems in their work.

4.2.2 Data Analysis

First, the interviews were transcribed from audio recordings into texts. The texts were analyzed with NVivo qualitative analysis program. Transcribed interviews were loaded to NVivo and the texts were classified according to the theoretical framework. The interviews were interpreted to find out case company's current data governance situation and the issues that are faced in day to day work for example in trying to implement automated marketing capabilities.

Appendix 2 displays an example of the analysis using NVivo. Each of the four interviews of the eight informants was first analyzed independently. The answers of the respondents were classified to an applicable subject presented in the theoretical framework. After the classification of the interviews, each of the subjects from the theoretical framework had combined findings from the interviews. These findings were presented in chapter 5 objectively and ordered according to the subjects from the theoretical framework. Then, in the chapter 6 these findings were used to find answers to the research questions and compared to previous research on data governance and automated marketing.

The purpose of the findings chapter is to present the case study's findings without adding or removing anything. Quotes are used to provide better visibility into the views and opinions of the respondents. After presenting the findings in chapter 5,

the Discussion chapter 6 presents these findings in the light of research questions and compares them with previous research presented in the chapters 2 and 3.

4.3 Theoretical framework

The theoretical framework is adapted from Otto's (2011b) Morphology of Data Governance Organization. Empirical data from the interviews and documentation is interpreted in the light of the topics presented in Figure 7.

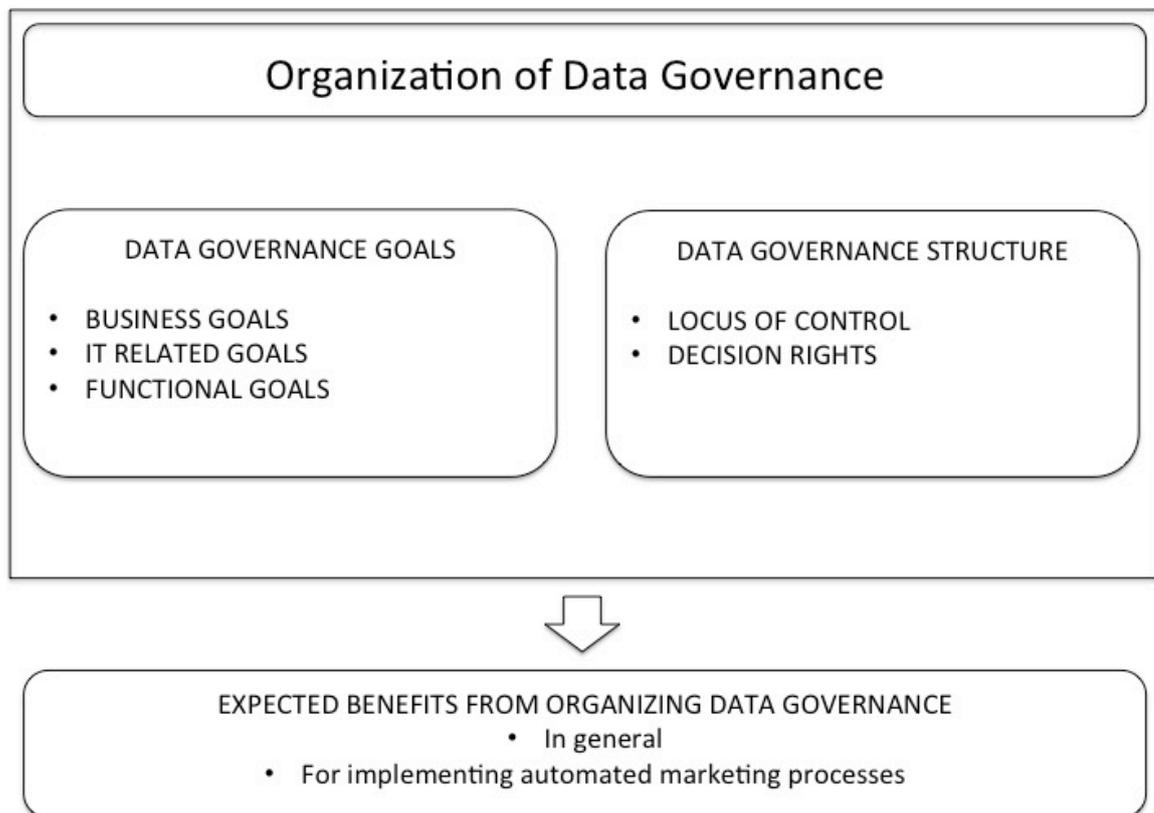


Figure 7: Theoretical Framework

Organization of data governance is looked from the aspects of the goals and the structure. The data governance goals are divided to business-, IT related- and functional goals. The data governance structure is looked from the ownership and decision rights points of view. The morphology of data governance organization has also aspects of the organizational form and roles in the data governance

structure. (Otto, 2011b) These are left out from the framework in this thesis because the case study is finding answers to expected benefits of data governance, not who particularly should participate in data governance work.

The bottom part of the framework represents the findings of the case study. Empirical material is interpreted in the light of organizing data governance displayed in the framework and the expectations of the case company are presented from these points of view.

The IT related goals in the morphology of data governance organization are defined to increase data quality and support IT migration. The functional goals include the creation of the data standards. Other functional goals stated in the morphology of data governance organization are related to data strategy, policies, stewardships and processes how the data governance operates (Otto, 2011b) The case study is looking to find what expectations the case company for these aspects.

Data governance structure is looked from two aspects. Locus of control means who has overall responsibility and ownership of the customer data. Decision rights look into where in the organization the organization wide decisions regarding customer data are made.

The contingency model for data governance (Weber & al, 2009) is focusing on company specific contingencies when designing data governance. Data Governance in the Agile Governance Model Framework (Korhonen & al, 2013) is more focusing on the roles and responsibilities and how to organize data governance from that point of view. As this thesis is looking to find out case company's expectations of the benefits from organizing data governance, the morphology of data governance (Otto, 2011b) was most suitable for the basis of the theoretical framework because it looks data governance in a holistic way. Next chapter presents the findings from the case study.

5 FINDINGS

In this chapter the findings are looked in the light of theoretical framework presented in the previous chapter. The direct quotes from the interviews are translated to English in order to keep the thesis readable, the original Finnish quotes are presented in Appendix 3. This chapter reports the findings from the interviews objectively and the discussion between findings and available theories is done in the next chapter.

In the beginning of the interviews, the respondents were presented with the background that explained the predefined goals. The case company has defined three main business goals, to improve customer experience, to increase value of existing customer base and to take into account legal aspects regarding customer data. First one of the goals, the improvement of customer experience, means that customers should be able to easily access and update their personal customer data. Secondly, to increase the value of existing customer base, case company is has defined that they should be able to offer personalized services for consumers by utilizing cross- and up-sales methods effectively. The third goal is regarding legal compliance. There are strict rules how customer data can be stored, utilized and removed. For example the Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (eur-lex.europa.eu) defines guidelines how customer data should be handled. Data governance needs to take into account this aspect as well. For the functional goal the case company has identified a need to create unified standard for handling customer data throughout the organization.

These business- and functional goals may have many different aspects, but within in the scope of the interviews, the goals were looked from data governance point of view.

5.1 Data governance goals

The respondents were first asked what are their main goals related to their position in the case company and what expectations or how they see the data governance and utilization of the customer data should help to reach these goals.

The Marketing Director began by describing the background why the case company is planning to implement data governance processes. Because of the fact that people spend more and more time online, the company has identified needs of improvement in many areas.

“..when we think from the perspective how the customer interaction is done in online it forces us to do right things which streamlines our doings and improves the customer experience in any case.”¹

First goal from data governance the marketing director indicates is that the customer data is correct and it can be utilized in cross- and up-sales efforts effectively. In order to do successful cross- and up-sales, the customer data needs to be standardized through out the whole company. She points out that the company regularly faces problems with the different versions of the same customer. For example one product line is using independent CRM from other product lines for handling the customer data. This data is not always in the same format with other product lines' data, which causes problems and errors in marketing and customer communication actions.

Secondly the case company provides different options for customers to provide and update customer data in self-service portals. If customer does so, the Marketing Director expects the data to be updated through out the company. Also, this updating has to be easy and clear to customers in order to improve the customer experience in the online services. Third goal is relating to having a way to store and utilize customer data related to individual customer's current life-situation. She elaborates the problematic in not knowing the individual customer's current situation well enough:

“How do we improve our capability to tell about relevant things to the customer related to her or his current life-situation or customer relationship? Now we push things to the customers, we use big target groups, but we would like to be able to target individually to customers like “now that you have moved to your own flat and started in a new job...””²

One more problematic area according to the Marketing Director is the handling of prospect customer data. The term prospect means customers that are not currently case company’s customers but their customer data has been stored for some reason. These reasons are for example some kind of campaigns or competitions, where customers are asked to provide their contact information. Currently the company does not have any rules, policies and governance for storing and utilizing prospect data.

When addressing more functional and IT related goals of data governance, the Marketing Director was asked what is the most important and critical thing regarding the quality, overall comprehensiveness and usability of customer data that should be fixed.

“..just the basic things should be fixed.. that we would have a plan how the customer data is part of the big picture.. and the updating of it [customer data] works end to end.. these two are related to each other, the validity of the data and the ability to update the data, these are the most important things.. I see that if we are able to fix these, many other things would move forward.”³

“I have great expectations towards this project.. so that we get good metrics [for data quality] and agreed ways of working. Nevertheless, this is in the core of our business. We have a model for cross- and up-sales. If the customer data is not correct, the model does not exist! And it is a fact that just the customer data does not solve anything, we have to have the related data in place as well, product data, billing data, contract data.. Then we have the data needed for customer relationship management, the different dimensions..”⁴

For conclusion the Marketing Director believes that organizing the data governance processes the company gains better and commonly agreed ways of seeing the issues related to customer data.

“I think that this kind of activity if it is done end to end we gain better common understanding. It can be that I don’t have an understanding how for example the director of business unit A, what kind of visions he has for improving the customer interactions. I think that this helps, when we have this governance and standards, it helps us to see the things in similar way.”⁵

Director of Business Unit A states three main goals from his point of view. Firstly, the company aims to retain their market share in the products his business unit is providing. Second goal is to increase the customer billing by up-selling more expensive products and the third goal to cross-sell another products that the company is providing, which also leads to the increased customer billing.

When asked should the company encourage customers to provide information in order to more effectively succeed in these goals, the Director is somewhat skeptic. In his point of view, rather than asking customers to provide information about their life-situation and preferences, the company should be able to interpret this information from the customers’ actions in self-service portals, webpages and other customer interaction channels.

“The concept of us buying or motivating the customers to tell more about themselves has to be done really systemically, all the time, in all the customer interactions and it requires enormous efforts. I don’t really know if the pay off is going to be sufficient!... instead we should improve our capability to react to what customer is telling to us with his or her actions.. for example, so that we would connect to customer data what the customer has done in our web-pages. What he or she has been looking there, that itself is valuable information and we don’t even have to encourage the customer to give this information.”⁶

The Director looks forward that data governance helps the company to organize the customer data in a way that they are able to present the most valid offer to the customer in each customer interaction. If the company has ten different products available, they should be able to identify from the customer data and customer behavior automatically which one of the products the customer most likely would buy and present this either on the web pages or to the sales person. He stresses that the aim should be in making the sales persons work easier by providing

automatically the information about the product that is most suitable for given customer.

Another important aspect according to the Director of Business Unit is the regulatory and legal compliance. There are not clear definitions what customer data can be utilized for marketing purposes. Data governance should provide clear definitions in a way that there is no room for misinterpretation of the customer data.

“..we have many different opinions about what data can be used to different purposes. Some of these opinions are correct, some incorrect and some in a grey area. If we start to organize customer data structures, there should be defined in the metadata of each customer data attribute to what purposes that data can or can not be used. And then the [marketing] permissions, unambiguous definitions what the permissions enable.”⁷

When continued how well the company is able to utilize the customer data and how the customer data should be utilized, the Director explains that the company is good in analyzing customer data but the actions are more or less ad hoc based. As an example he points out that the analysts can identify by analyzing customer data the customers that have high potential to stop using the products the company is offering, but there is no continuous process for actions to be taken for these customers. Company has lot of data regarding the customers, but the company is not so good in utilizing all available data. According to him, the customers should be faced as an individual and the customer data should be arranged to support this goal.

“..I believe very strongly that we have to meet the customer as an individual. They are individuals and therefore our [customer] data model has to be based on the individuals. And what services this individual has or has not, we need to build information based on this. Utopia would be that we had a plan for each individual. How in the life of the individual we make his or her life easier by offering the right services... but what it means in practice?”⁸

The view on the prospect data differs somewhat from the view of the Marketing Director. When the Marketing Director looks the prospect data from more

operational perspective of creating processes how the company can utilize and store prospect data, the Director of Business Unit looks the issue as a bigger picture. According to him, the company should aim to have a plan how to serve each Finnish person who is not yet the company's customer. He says currently company is far from this vision and he does not know how this vision could be reached.

More on the functional aspects the Director of Business Unit sees places for improvement in the processes how to organize, utilize and combine customer data from many different sources.

"There is lot of information but we do not collect it... This wholeness when customer has interacted with us, what the customer is interested in. This wholeness connected to customer's usage and changes in the products the customer has.. From these we could reason lot of things, we just should collect all this data.."⁹

Neither the Marketing Director nor the Director of Business Unit is addressing directly IT related goals. This is most likely related to their roles in the case company as they are working in the business functions. When analyzing the interview of the Business Analysts and the interview of the Data Manager and the Customer Data Analysts, the perspective is more operational and the problems and needs for improvements are more concrete.

The Business Analysts were asked how well from the data point of view the company is currently doing in succeeding cross- and up-sales, analyzing the customers as individuals and acting based on the individual customer's life-situation. According to them, company is not very good at the moment in these areas and most of the effort is put in analyzing what has happened in the history instead of trying to predict what will happen in the future. The actions are most of the time ad hoc and systematic processes are missing.

Senior Business Analyst 1:

"..but when we start looking an individual, his or her lifecycle, how it has developed from being a student to something else.. I think we are missing this? We don't have [the data] of the individual customer, how he or she lives and has developed.. and when we want to target just for you and look how your history and other things have developed and do some scoring.. this is missing.."¹⁰

Senior Business Analyst 2 continues:

"..we have done cross- and up-sales activities already in the beginning of 2000, but these activities have not been systematic and now they were left out.. but some departments are again doing these activities? In a way, we are missing systematic and continuous way of working, it requires that you do something, look what was good and bad in it, and then do it again... this we have missed as long as I have been working here, we have irregularly done something and then it has gotten left out for some reason.. I don't know is it because of the people, the systems or because of what, but it is missing.."¹¹

Next the Senior Business Analysts were asked what kind of benefits the case company would gain from business and analytics points of view, if the customer data would be standardized and there would be governing processes in place. They see three main areas of improvements this would bring to the case company. First, they look the benefits from the financial point of view. According to them, company would gain more revenue by the better possibilities to do cross- and up-sales, if the customer data would be better. The company would be able to target more meaningful offers to the customers if the data would be consistent and this is believed to materialize in an increase in revenue.

Secondly they see that if the customer data would be standardized and there would be continuous processes for maintenance and utilization of it, it would free their time to focus on the utilization of the data. Currently lot of their time is spent in trying to find out where certain data is located and how it can be utilized in the analytics. If the customer data would be standardized, they believe that they could focus on more meaningful analysis and that would benefit the whole company. They feel that lot of their time is now spent in meaningless work because of this.

Third area of improvement would be the increased trust to data and the analytics in general. Now, because the customer data does not have any standards, there is room for misinterpretations of data and analyses from the same subject may give different results depending on who is doing the analysis. This causes confusion in different parts of the case company and decreases the trust to the analytics.

Last two of the previous improvements identified by the Senior Business Analysts are more related to the functional goals of data governance. A big challenge in the case company seems to be lack of communication between the parties who use the data, who develop the data warehousing and who make changes in the CRM's.

Senior Business Analyst 1:

"..one challenge we have is when something is changed and we don't get the information about that.. we spend time wondering why these figures looks strange... well, there was this change done.. the changes done in the bedrock, the changes in definitions.. that information is not shared.."¹²

This lack of communication seems to lead on frustration, because the time is spent in trying to figure out what certain data means and the analysts are not sure to whom to turn into to get the needed answers. They also mention that recent outsourcings in the data warehousing function have complicated the situation even more.

On the IT related goals of the data governance the biggest challenges currently are in the amount of the sources for customer data and quality issues it brings. According to the Senior Business Analysts, they need to combine customer data from many different source systems and the data is not standardized across these systems. This leads to situations when for example the management has asked for some figures or analyses, the results may vary depending who has delivered them and what source have been used, even if the asked figures should be identical. Senior Business Analysts also identify room for improvement in the way they themselves are working.

Senior Business Analyst 2:

"..the thing that there are so many sources and everyone is fetching [the data] with their own standards, it is catastrophic... Or we should uniform the needs of the business, so that we had one data that serves all needs. Now we have many different needs and data, what sense does it make to have two, three or four different type of customer data? It does not make any sense..."¹³

Senior Business Analyst 1 continues on the subject:

"Exactly, there should be discipline... we ourselves are not working in a very disciplined way, we do too much things in the way we think is right... this shows for the end user... it can be that one thing is asked from you and from us and the result is two truths. We should get rid of this."¹⁴

Also, the organization of data governance could improve knowledge sharing within the case company, according to Senior Business Analysts. It would help break the boundaries between different units of the company and this way increase the efficiency.

Senior Business Analyst 2:

"In a way information and knowledge, knowledge sharing could be easier when we are not in silos. Reducing the duplicate work when we are not in silos? Increasing knowledge... one can think of these."¹⁵

Data Manager and Customer Data Analysts also have an operational view on the current situation of customer data, it's utilization and problems that should be fixed. Their responsibilities include the overall utilization of the customer data, providing target groups for marketing- and sales activities and operational implementation of automated marketing capabilities. Therefore the interview is more focused on the functional and IT related goals.

When asked what are the biggest problems currently in customer data utilization, the Data Manager and Customer Data Analysts identified the lack of standards as

the main problem. It causes extra work for them when same the same information is stored in numerous ways in different CRM systems as well as within the same CRM system. According to them, the problem considers different data elements such as names, addresses, e-mail addresses and phone numbers.

Data Manager:

*"In general we have three systems where for example my name is stored. In one system it is stored in all capital letters, in the second system with first letters as capitals including my second name and in the third system it is correct"*¹⁶

Customer Data Analyst 1 continues:

*"It is too wild.. From my point of view when I use the data to create target groups, I get too many versions. I should get only one version of each customer but I get many versions.. Little exaggerated, we don't have any discipline in the ways you can store data.."*¹⁷

Similar way as the Senior Business Analysts noted, this interview indicates that the lack of standardization and discipline how the customer data is stored and handled causes ineffectiveness. Customer Data Analysts have to spend lot of time in combining and modifying data. This causes for example slowness in creating target groups for the sales. Also according to them, it could result as ineffectiveness in the actual sales and poor customer experience, because wrong customers were selected to the target group because of the inconsistencies in the customer data.

When the Data Manager and Customer Data Analysts are asked how good or bad the case company is in targeting offerings based on the individual customer's life-situation, the respondents start discussing about problems in the definition of customer. From the customer data point of view, there are problems in identifying different roles of the customers. For example the respondents explain the problematic in products where typically whole household is using the product. In the customer data the case company has only information of the member of the

household who has bought the product. Because the Customer Data Analysts are not always able to identify members of the household, customer already using certain product may end up being targeted the same product again.

Customer Data Analyst 1 explains:

“..and there are roles we don’t know or recognize.. For example Product B does not typically have an user, instead you have the product in your household and your spouse, kids and whoever happens to be there are using it.. And if members of that household are of legal age, we cannot sell the same product to all of them because one of them has already bought it.. This means we have to look to customer relations on different levels.. which in turn requires that the data we have to identify a household has to be better standardized what it is now..”¹⁸

When asked about should the case company somehow encourage and enable customers to give more information, like the Vice President of Business Unit A, also these respondents were skeptic. According to them, there have been attempts of collecting customer preferences in self-services, but this collection has not been systematic and there has not been any ways for customers to update this information. They see that it would be more important to focus first on getting the processes around customer data efficient before focusing on this part.

Moving to data quality issues, the Data Manager and Customer Data Analysts are asked are there processes for systematically fixing wrong data, has the company be doing any ad hoc quality improvements for customer data or is this something that the respondents do not know about. They describe ad hoc actions that have been done, for example address data has been fixed. The process for systematic customer data quality improvements is missing, according to these respondents.

One of the Customer Data Analysts had recently started in the position when the interview was done. She was asked what problems there are when starting to work with customer data and what are the biggest issues from her point of view.

Customer Data Analyst 2:

"More I have had problems to learn how to use the tools. But yes, things seem to be spread around, that is why it has been hard to start in the new position, because you have to learn where to find something.. "19

She was asked doesn't she have some documentation about the definitions of data and how the data is standardized, she continues:

"Exactly, if I get an assignment that is and sounds really simple, then the execution means that I fetch the data from one system, take to the another system and twiddle with the data there and then twiddle some more.."20

On the data standards, in the Data Manager's and Customer Data Analysts' opinion the standardization should have a bottom up approach. According to them, company should start by creating standards for the data attributes such as name and social security id. They see risks if the company tries right from the beginning create definitions and standards for bigger entities, such as what is a customer? Customer Data Analyst 1 explains:

"I say lets not make a suicide, let's not begin defining standard for consumer customer, instead we should standardize the single data elements.. I mean lets standardize social security id, first name, last name, address, all these things... and create hierarchies in order to combine the data elements.. Yes, the visio should be there, but it should not be nailed that it is this! In standardization, I would not start defining higher level before the details are standardized, that will bring promlems.."21

Another functional related handicap they point out is that there should be information or metadata about the correctness of a given data. They give example that company has and is collecting customers e-mail addresses in various places, but there is no information has an e-mail ever been successfully delivered to a given e-mail address.

Customer Data Analyst 1:

"We'll most likely accept that the data is according to the standard but after that we need the log that the data has been checked and it [e-mail address] works for sure.."22

Data Manager continues:

*"Now we are missing that kind of.. So that we have the data and the information that the data is correct... that is missing"*²³

One comment from Customer Data Analyst 1 seems to sum up the current situation in the case company from their point of view. They are currently able to support sales and marketing by utilization of the customer data, but they could be working more efficiently if there would be structured ways in handling the customer data through out the company. When asked is the data mostly correct, Customer Data Analyst 1 answers:

*"We are good, we are truly good. But we cannot do things really efficiently and we have to use... Our input goes to little wrong things, we have to do raw work to collect the data in order to create a target group.. and we cannot spend hardly any time to try to understand the data and learn to do good target groups.."*²⁴

5.2 Data Governance Structure

The respondents were asked whom should own the customer data and if there were data governance organization, whom should participate to that. The views varied somewhat. The directors were looking the subject on higher level where as the Senior Business Analysts, Data Manager and Customer Data Analysts had more operational view.

The Marketing Director was asked who should own the customer data and who should have overall responsibility of handling the customer data including creation, updating and deleting customer data. She thinks overall responsibility should be in her unit, which has the responsibility of the customer communication actions. In her opinion the business units are working too much in silos in order to have an overall responsibility.

*"It is this customer relations function.. in my opinion, if anyone.. who else could have a responsibility of customer lifecycle than customer relations.. of course in a cooperation with the business units. Quite silo like the business units are customer oriented, when you become a customer of Product B, what happens in different states, they are really interested.. but I think that customer is a case company's customer that is having Product B, Product C, as much as possible of our products.. That brings the customer lifecycle more concrete."*²⁵

Nevertheless, when asked who should participate in data governance work, she continues that it has to be organized in a way that there is participation across the different units of the case company.

*"Well, most likely from all the business units.. so that business owners are looking things from the point of view of particular products, sales, naturally customer communications, customer service.."*²⁶

The Director of Business Unit A is not taking a stand who in particular should own and be responsible of customer data. He addresses the problematic if some business unit has the ownership. According to him, some instance should view the customer data in a holistic way. When asked who should own the customer data, he replies:

*"Good question... it should not be any of our business units, because then it will be in a silo.. Most likely we should have some instance, not taking any stand which of the current or upcoming instances it should be, that looks the subject through out the whole.. In a holistic way, otherwise there will be holes in the legal aspects.. The most important thing is that the ownership is defined, who ever it is, beats me! And I am not that interested in it.."*²⁷

The Senior Business Analysts discuss the problems they are facing because the lack of ownership and governance in the customer data. Similar way as in data governance goals, the lack of ownership and governance causes ineffectiveness and lack of trust in the data and results that analytics produce. They stress that the ownership and especially responsibilities should defined and stated clearly. Senior Business Analyst 2 states:

“..to state this in exaggerated way, someone should put their life on line for this thing through out the company”²⁸

They also stress the importance that the participation in data governance has to be wide enough, in order to take into account all the different aspects of the customer data needs. They state that the figures company reports in annual reports, accounting and financial reports has to match with figures in the internal reports and results analytics are delivering for business users. Currently there are too often two different figures, and this causes confusion in the case company and extra work to find out reasons in the differences. According to Senior Business Analyst, there should be participation from every part of the company such as reporting, finance, analytics and customer care. They see that the ownership should reside in the business units.

The Senior Business Analyst also discuss about the characteristics of the persons who are responsible of organizing and maintaining data governance processes. Senior Business Analyst 2 says that it is more important to find right persons than in what part of the organization the ownership and responsibilities reside.

Senior Business Analyst 2:

“I have seen here different models but the mess has been always more or less the same. In my opinion it is depending on the will and the people. Someone has to take the ball, you can draw it to whatever organization... but someone has to get excited about this and be responsible, and less we have hierarchy, the better it will be. But there have to be all stakeholders involved in decision-making. It cannot be that these things are looked only from one point of view and then all these others who needs these, their needs are ignored.”²⁹

When asked from the Data Manager and Customer Data Analysts who should own the customer data the discussion starts from whom should not own it. According to them, business cannot be the owner of the customer data because they work too much in the silos and are not always able to recognize the other business unit's needs. Each business unit has their own goals, therefore in their opinion it would be best if the ownership of customer data would be separated from the business

units. Another aspect they point out is the support from the management. In order to succeed in the data governance activities, there needs to be commitment and support from the top management.

Also, the Data Manager mentions that the persons who have been long time developing the main CRM system used in the case company are not always willing to look problems in the system critically. This increases the need for the commitment from the top management. He explains these aspects:

“Then the another point of view is that top management should commit to this. When the director sees [the importance], he can decide that others will commit also. But of course he cannot change individuals and their doings.. In this company part of the staff on the technical departments have been working here long as hell and they have a love relation to that CRM system..”³⁰

5.3 Automated Marketing

The respondents were not directly asked about the expected benefits from data governance to automated marketing but there can be found mentions and related issues in the interviews. Some of the issues that came up in the data governance goals chapter 5.1 are also related to automated marketing.

The Marketing Director explains how she sees the data governance as essential thing in order to succeed in the business goals the case company has. Because she has been bringing the current problems into the knowledge of the board of directors, the case company has started to see that something needs to be done. In order to succeed in triggered, automated marketing, the data governance needs to be organized according to her. The Marketing Director was asked does the board of directors see the data governance as important issue and does it come up in their discussions.

The Marketing Director:

*"It comes up, I have pushed it there. It has come when we have been thinking of developing online capabilities, it comes to my agenda continuously when we have this and that and when I am thinking of all the visions we have regarding the customer's lifecycle management which is based on that the messages would be triggered and based on customer's lifecycle or life-situation and what the product departments want to sell... yes, this is very critical thing.."*³¹

The Director of Business Unit A sees that company should have ability to automatically identify what is the most likely offer for given individual customer at each customer interaction. According to him, based on the company's customer data, the company should be able to make the life of sales persons easier by providing this information as well as offer the most suitable offers in the company's web-pages when customers are browsing there.

*"What we need to identify is what would be the easiest to sell to this individual customer right at this moment. If we have 10 different things that we can sell, what in factual would be it, that we should be able to tell to the customer as an offer on our web-page and on the other hand to our sales persons in different sales channels.. from this selection, what is the most likely the offer that is worthwhile to offer to that customer.."*³²

The Senior Business Analysts discuss the problematic in recognition of an individual customer. They address that they are mostly working with snapshots of the current situation. This makes it hard to track the changes on an individual customer level, Senior Business Analyst 1 explains:

*"But then we start looking like this individual, how it's usage, devices and other things, how they have developed and then ability to start targeting... This is missing!"*³³

Data Manager and Customer Data Analysts also look this aspect from operational point of view. According to them, the problems in data quality are generating problems for implementing automated marketing capabilities. One individual customer can be stored in different ways in different CRM systems and even within the same CRM system.

Customer Data Analyst 1 explains that duplicates of an individual are not so dramatic when doing manual target groups for specific campaigns because there is possibility to manually filter these groups. The Data Manager continues on explaining that the duplicates and different embodiments of an individual customer turn out to be problematic in automated marketing. He disagrees with the opinion of the Customer Data Analyst and explains his reasoning:

“In this kind of target group work maybe yes.. but then when we at some point do this kind of decision-making, logic on top of the data, then it is a problem. If we think that you make a target group or whatever campaign and we think that some individual is selected because he or she has some specific service. Then we make some other campaign with some other selection criteria and the same individual gets selected to that again because he or she looks like different person. In reality our intention is to filter that out because he or she was already targeted last week.”³⁴

Customer Data Analyst 1 continues with the problematic of the definition of the customer and conflicts in some customer data attributes as well as in marketing permissions:

“Then comes the thing that if we strictly look at the customer, name, social security id and address, but as soon as we start expand it then comes e-mail address and other things involved.. An individual may have given in different instances different e-mail addresses.. Or he or she may have given one e-mail address and in one instance the marketing to that address have been denied and in other instance allowed.”³⁵

6 DISCUSSION

In the previous chapter the findings from the empirical material used in this case study were presented objectively. This chapter looks these findings in the light of the theoretical framework and previous research on data governance and automated marketing presented in chapters 2 and 3. The findings are interpreted to find the answers to the research questions.

The chapter is divided according to the research questions of the thesis. First it focuses on data governance and the expected benefits the employees of the case company have for it. Second part looks the data governance from the automated marketing point of view. It addresses how the members of the case company expect data governance to benefit in implementation of automated marketing capabilities.

6.1 Expected Benefits from Data Governance

First, the expected benefits are looked from the business goals of data governance point of view.

6.1.1 Business Goals of Data Governance

The interviews indicate that main business goals the respondents expect are to improve customer experience, to have better means to do cross- and up-sales, to gain a capability to identify individual customer's life situation, to improve operational efficiency in different ways and ensure that the handling of the customer data is according to the rules and regulations.

The Morphology of Data Governance states that improvement of the customer experience is among common business goals of data governance. (Otto, 2011b) The Marketing Director said that because the customers are more and more interacting in the online channel, the case company has to provide the customer's

easy way to update their customer data in online channel and this way improve the customer experience. Customer Data Analysts look the customer experience from the sales point of view. They expect that the customer experience is better when the right customers are targeted with the offers. Currently because of the problems in identifying customers and different roles they may have, some customers may end up being targeted of something they already have bought.

The cross- and up-sales came up in the interviews frequently. By organizing data governance processes the respondents expect the case company has better means in succeeding in the cross- and up-sales and this way to gain more revenue. The Marketing Director goes further by stating that the cross- and up-sales does not exist if the customer data is not handled in correct manner. The previous research on data governance does not directly address the benefits for the sales actions but data governance linked to actions that are fulfilling company's strategy. As it is stated, data governance aims to make organization's realize that the data is valuable asset. (Korhonen & al, 2013) When data is viewed as an asset, it means that has a potential to bring business value to the organization. (Khatri & Brown, 2010) Data governance should establish the guidelines through out the organization and make sure that the data governance activities are in compliance of the organization's strategy (Weber & al, 2009) The respondents see the customer data as a valuable asset and believe that with better governance processes the case company could get more revenue through increased cross- and up-sales. The case company therefore has realized the value of the customer data. Cross- and up-sales are part of the case company's strategy, so the members of the case company expect data governance to support the acting on this strategy.

Another issue that came up in the interviews and that is related to both, better customer experience and cross- and up-sales, is the ability to identify individual customer's life-situation. Marketing Director said that currently the case company is too much pushing the sales efforts for big target groups instead of targeting based on the customer's life-situation. According to Director of Business Unit, Data Manager and Customer Data Analysts, the company should gain ability to utilize

the customer data to identify individual customer's life-situation in order to do more effectively and meaningful cross- and up-sales.

All three previously described goals can be interpreted that the case company needs to define the data principles. These principles set the direction for other data governance decision areas and create a linkage between the data and the business goals. (Khatri & Brown, 2010) Further, this is interpreted in a way that the selected members of the case company expects the data governance to bring means for providing better customer experience, increase revenue through more effective cross- and up-sales and to improve case company's ability to recognize individual customer's life-situation and utilize this information.

On the operational efficiency the expectations of the selected members of the case company are related to having agreed ways of working, moving from ad hoc actions to continuous processes and being able to do more meaningful things. The Marketing Director expects that the company gains benefits through agreed ways of working through implementing data governance processes. As she pointed out, currently there is lack of shared understanding and through company wide data governance and data standards she expects the case company to improve on this area. The Director of Business Unit and Senior Business Analysts expects to gain ability to move from ad hoc utilization of the customer data to continuous utilization to support business goals. In both, the interview of Senior Business Analysts and the interview of Data Manager and Customer Data Analysts, the respondents said that because of the lack of data standards and data governance, lot of their resources is spent on things like trying to find out where some data is located, interpret what some data means and trying to figure out what has been changed because some figures seem wrong. They feel that this kind of work is not meaningful and it causes frustration. Also, the Senior Business Analysts view their own ways of working critically by stating that they are working often in a way they think is best. This indicates that because lack of commonly agreed ways of working with the customer data, the members of the case company operate in the best way from their point of view, which in turn could result as increased operational inefficiency in some other part of the company.

To increase the operational efficiency is regarded as a common business goal for data governance. (Otto, 2011b) When organizing data governance processes, they can be viewed from the effectiveness and efficiency points of view. These address issues of doing the right things and doing things right. (Korhonen & al, 2013) One of the decision areas in data governance is data access. It defines how to access the data and who can use the data. It should also ensure that different functions of an organization have the access to needed data. (Khatri & Brown, 2010) When looking the issues the respondents brought up about the need for increased operational efficiency, lack of previously described processes can be seen. There is lack of shared understanding and commonly agreed ways of working. On the strategic level the respondents see a need for having common understanding of the needs of different business units. On more operational level, there is a need for continuous utilization of customer data as currently many of the actions are ad hoc based. Also there is a need for the definition of data access. Currently respondents feel like their time is spent in meaningless work, for example in trying to find out where some data is located.

6.1.2 IT Goals of Data Governance

On the IT related goals the respondents identified the need for improvement of the customer data quality, problems the current environment of multiple CRM systems bring, different versions of a customer in different CRM systems as well as within the same CRM system and lack of continuous data quality improvement process. The Marketing Director also told that the customer data should be updated through out the systems if it is updated in one place and the customers should have easy way to update and provide customer information. These are similar goals as stated in the previous research on data governance. Data quality improvement and information system integration are among common IT related formal goals of data governance. (Otto, 2011b) Information systems perspective is viewed horizontally as an organization wide subject and addresses issues like data architecture and information systems support. (Weber & al, 2009) Organization specific information

system landscape should be one of the contingencies to be taken into account when organizing data governance. (Otto, 2011c) Based on the international survey conducted among practitioners in 2007, one of the main objectives and motivation factors for implementing data governance is the improvement of data quality. The survey also shows that a single view of customer is commonly expected from implementation of data governance processes. (Pierce & al, 2008)

6.1.3 Functional Goals of Data Governance

Functional goals the respondents indicated are partly related to operational efficiency aspect as well. The respondents expect the data governance to provide data standards across the organization. Lack of standardization is causing inefficiency and frustration among Senior Business Analysts, Data Manager and Customer Data Analysts. According to them, they now need to spend time on modifying the data, trying to find out what some data means and struggling with different formats of the same data attributes. Also, they feel like the standardization should start from defining each customer data attribute and enforcing the use of standards across the information systems and organization. From metadata respondents expect the information of what the data means and how it can be used as well as the information is the given data attribute correct. The Director of Business Unit identified need for organization wide data strategy that addresses the whole picture of organizing, utilizing and combining the customer data. The basis for data structure should be individual customer because customers are or should be handled as individuals.

Another view on the functional aspect the respondents brought up is the lack of trust to the data. Senior Business Analysts stated that depending from whom some analysis or report is requested, the results may be totally different. According to them, reason for this is because of lack of standards, lack of communication and missing agreed ways of working. They also expected that by organizing data governance, the case company would improve knowledge sharing within the company. Similar aspect can be seen from the interview of Data Manager and Customer Data Analysts. One of the respondents had recently

started in her position and she explained it has been hard to start in the new position because there is no documentation or instructions about customer data available. Also related to this, respondents brought up the need for definition of the customer. There is not available commonly agreed way of defining what is a customer and what it means from the customer data point of view.

Based on the previous research on data governance, the functional goals are related to the decision areas for which the data governance specifies rights and responsibilities. The goals include the creation of data strategy and policies, implement data standards and metadata management, establish data life-cycle management and data architecture management (Otto, 2011b) The case study shows that the selected members of the case company expect the organization of data governance to provide improvements on these areas. Interestingly, the respondents also expect to improve the knowledge sharing and communication within the company by implementing data governance processes.

6.1.4 Data Governance Structure and Ownership of the Data

On data governance structure the respondents had a shared view that the participation on the data governance work should be company-wide. It should be organized in the cooperation with the business units including participation from different business units, sales, customer communications, marketing, customer service and finance. The Senior Business Analysts brought up the importance of finance to be involved in data governance. They said it is important to ensure that the internal and external figures are matching.

About the ownership of the customer data and overall responsibility the views of the respondents were not as similar. Marketing Director thought that ownership should reside in her organization, which also has the overall responsibility of the customer communications. Director of Business Unit, Data Manager and Customer Data Analysts said that the ownership should not be within some business unit in order to avoid silos. Senior Business Analysts were only ones stating that ownership of customer data should reside within business units.

Support and commitment from top management was seen important in the interview of Data Manager and Customer Data Analysts. They said that it is needed to give authority to execute possible changes needed in for example CRM systems. Also, the characteristics of the person leading data governance activities were discussed in the interview of the Senior Business Analysts. According to them, the person should be interested and excited about the subject and have continuous drive to get things done. Also, in their opinion case company should avoid building too much hierarchy on data governance.

Previously it has been stated that data governance should create guidelines though whole company for data quality management, define roles and responsibilities and involve both business and IT stakeholders. (Weber & al, 2009) This case study shows that the selected members of the case company expect data governance to be organized in a way that the needs of different parts of the company are taken into account. All the respondents viewed this from business or marketing point of view, not from IT point of view. This could be because the respondents were from more business than IT related functions but it also tells that the respondents expect data governance especially benefit the case company in reaching business goals.

The involvement of the executive management is seen as important in organizing the data governance in the previous studies. Data governance organization should have an executive sponsor who provides sponsorship and sets strategic direction for data governance activities and is a member of the executive management of the organization. (Weber & al, 2009) There is no common view on this matter, but the locus of control should be located in both executive management and mid-level management. (Otto, 2011b) Korhonen & al (2013) goes further on stressing the importance of the involvement of the executive management. According to them, previously presented models for organizing data governance focus on the functional issues and operations are led several levels below top management. Because of this, they fail to address data governance across the whole organization. (Korhonen & al, 2013) Contradictory to these theories, the studies among practitioners show that data governance activities are led several levels

below top management in practice. (Otto, 2011b; Pierce & al, 2008) In this case study the respondents looked the involvement of the top management in data governance from the practical point of view. If the top management does not support and authorize the data governance activities, it could be hard to get other parts of the organization to commit for these activities.

The characteristics of the persons in key positions of the data governance activities have been described in the previous studies. Executive sponsor should have high credibility within the organization and should have a drive and ability to achieve changes through data governance. Another important role, chief data steward, should have leadership and communication skills and ability to address business- and IT-related issues to make data governance effective. (Korhonen & al, 2013) The respondents in this case study see that the success of data governance is depending the people and will. According to them, someone has to be responsible and excited about data governance in order it to succeed. Rather than hierarchical positioning or functional skills of a person, they see the personal characteristics important factor for success.

There is not available commonly agreed view on the balance between centralized and decentralized decision-making in data governance, it should be decided depending on the organization's characteristics. (Otto, 2011b) In centralized data governance the decision authority is in one location and decisions are organization wide. If it is decentralized, the decisions are made in different functions and are not necessarily organization-wide. Also, there can be a mix of these two, meaning some decisions are made in a centralized manner and others in more decentralized manner. (Weber & al, 2009; Khatri & Brown, 2010) In this case study the respondents are not directly addressing this issue, but they indicated that they should avoid building too much hierarchy and bureaucracy in data governance processes. This is interpreted that the members of the case company expect the data governance to have straightforward decision-making processes.

6.1.5 Recapitulation of the Findings

Table 5 presents the findings discussed previously in the same format as in Table 4 is presented six case studies where The Morphology of Data Governance was tested at the time. (Otto, 2011b) Similarly in this case study the two aspects of the concepts developed in the morphology of data governance, goals and structure, can be found. Formal goals in this case study are more concrete and have a direct relation to the case company's strategy. Although the respondents did not explicitly state how to measure these goals, at least the improvement of the cross- and up-sales can be seen as quantified goal. This case study also shows that respondents expect significant improvement in operational efficiency. In the six case studies presented in table 4 none of the cases had quantified goals and improvement in operational efficiency is not as clearly present as in this case study. On formal goals respondents in this case study explicitly stated expectations for data governance to benefit to IT related issues such as CRM migration and continuous data quality improvements. Many of the functional goals are similar in this case study as in the six case studies the comparison is done. In this case study respondents expect data governance to improve knowledge sharing, increase general trust in the data and provide company-wide definition what is a customer. These aspects were not present in the six case studies.

Data Governance Goals		Data Governance Structure	
Formal Goals	Functional Goals	Locus of Control	Organizational Form
<p>BUSINESS:</p> <ul style="list-style-type: none"> • More revenue through improvement in cross- and up-sales • Improve customer experience • Identify individual customer's life-situation • Operational efficiency: Common understanding, continuous utilization of customer data, freeing time to more meaningful work <p>IT:</p> <ul style="list-style-type: none"> • CRM migration • Continuous data quality improvement processes 	<ul style="list-style-type: none"> • Data standards across the organization • Definition of data access • Metadata, information about the data and is the data correct • Definition of company-wide data strategy • Increase trust in the data • Improve knowledge sharing • Definition of the customer 	<ul style="list-style-type: none"> • Ownership and overall responsibility organized in a way to avoid silos • Company wide participation • Support and commitment from the top management 	<ul style="list-style-type: none"> • Avoid hierarchy and bureaucracy • Straightforward decision-making processes

Table 5: Findings of the Case Study Organized According to The Morphology of Data Governance Organization

On data governance structure, in the six case studies presented by Otto (2011b) the data governance is led several levels below top management and the organizational form is quite centralized. This case study shows that the respondents expect commitment and support from the top management. The ownership and overall responsibilities should be organized in a way to avoid silos. By this the respondents indicated if the ownership of the customer data is located in a single business unit, the needs of other units could be ignored. Company-wide participation in data governance was important aspect also. On the organizational form the respondents did not directly state whether it should centralized or decentralized. Nevertheless, the findings indicate that the respondents expect data governance to have straightforward decision-making processes and to avoid supernumerary hierarchy and bureaucracy. This indicates that they would prefer more decentralized organization form.

The comparison of this case study and the six case studies where the concepts of the Morphology of Data Governance were tested (Otto, 2011b) cannot be made one to one. In this case study the presented findings are expectations of the members of an organization where as in the case studies these are compared the findings were describing actual situation in those organizations.

When organizing data governance, the strategy perspective should link the data governance to organizations' business goals and strategic objectives as well as provide the business case for data governance. (Weber & al, 2009) This case study shows that the selected members of the case company link the data governance strongly to the company's strategic goals. Also the expected benefits seem to provide clear business case for data governance – if the expectations are fulfilled, the case company will gain significant benefits from organization of data governance.

6.2 Expected Benefits for Implementing Automated Marketing Capabilities

The respondents were not directly asked what benefits for implementing automated marketing capabilities they are expecting from organizing data governance but related issues can be interpreted from the responds. Marketing Director and Director of Business Unit viewed the subject on a more strategic level, where as Senior Business Analysts, Data Manager and Customer Data Analysts had more concrete and operational issues in their responds.

When organizing data governance, the respondents expect to gain improvement to customer lifecycle management, which is based on automated and triggered messages based on the customer's life-situation. From the more sales point of view, the respondents expect to have ability to automatically identify in each customer interaction what is the most likely offer the customer would accept. The case company should be able to display on the webpages or for the sales person this information automatically and improve the sales.

In the customer data there seems to be problematic areas what the respondents expect to be solved by organizing data governance. In order to succeed in automated marketing, the individual customer and customer relationship's development should be utilizable in a better way. The Senior Business Analysts said that they are missing the view on an individual level to the changes in customer relationships. Another problematic area for automated marketing is the problems in the quality of the customer data. Currently there are many versions of an individual customer both in different CRM systems as well as within the same CRM system. This is causing errors when doing marketing in an automated way. Also the conflicts in customer data are problematic for automated marketing. Same customer may have given a marketing permit in one instance and denied the marketing in other. The respondents expect the organization of data governance to bring solutions for these problems.

In the previous research on the automated marketing it has been identified that the storing and utilizing of the customer data in a way that company has an integrated view of the customer is one of the key factors to succeed in automated marketing. (Hansotia & Rukstales, 2002) The automated marketing actions should be based on the knowledge of the customer in order for them to be successful. (Polcari, 2014) If the customer data is inconsistent across different channels of customer interaction, it can result as customer dissatisfaction. One proposed solution for this is integrated customer databases. (Rangaswamy & Van Bruggen, 2005) These all address the importance of the way storage and utilization of the customer data. They do not provide much insight on how the company should do this. This case study indicates that the selected members of the case company expect the organization of data governance to improve these areas as well. The data governance is expected to improve such areas as view to individual customer, view to customer relationship's development and data quality. These areas are expected to benefit implementing automated marketing capabilities.

As in data governance, also in automated marketing the organizational aspects are important. The marketing needs to be aware of possibilities technological development brings. (Zineldi, 2000) Organization of decision rights regarding

automated marketing should support cross-company communication. (Polcari, 2014) When the customer interactions are done in the different channels and different parts of the organization are managing these channels, some one should have overall responsibility of automated of marketing actions in these channels to ensure unified customer experience. (Rangaswamy & Van Bruggen, 2005) In this case study the respondents did not explicitly state that they expect data governance organization to provide means for organizing automated marketing related decision rights and communication mechanisms. Nevertheless, it can be seen from responds regarding operational efficiency that the select members of the case company expect data governance organization to provide common understanding of the needs of different business units. This is interpreted that this common understanding also benefits the implementation of automated marketing capabilities.

7 CONCLUSIONS

The final chapter of this thesis presents the summarized answers to the research questions based on the findings of the case study. Then the managerial implications of the thesis are looked from the case company's point of view as well as in general. Theoretical implications discuss the context of the thesis in the light of what new aspects this brings into the research fields of data governance and automated marketing. Finally, the critical appraisal of the thesis discusses the reliability and validity of this case study and makes suggestions for future research needs.

7.1 Answers to the Research Questions

This thesis aimed to find out what benefits employees expect an organization to gain from organizing data governance both in general and in the automated marketing point of view. First the previous research on data governance and automated marketing were presented in the chapters 2 and 3. The Morphology of Data Governance (Otto, 2011b) was selected as a basis for the theoretical framework that was used to interpret the findings of the case study. The empirical data was presented objectively and then looked in the light of the theoretical framework and other previous research in the Discussion chapter. The summarized answers to the research questions are presented here.

1. What benefits the employees expect the organization to gain by organizing data governance?

This case study indicates that the employees expect the organization of data governance to improve customer experience, gain more revenue through increased cross- and up-sales, provide abilities to identify individual customer's life-situation, ensure that the handling of the customer data is according to the regulations and improve operational efficiency. They expect to get continuous data quality improvement processes implemented and CRM migration to bring simplification to the current environment of the multiple CRM systems.

On the functional goals of organizing data governance the employees identified the need for company-wide data strategy and data standards. The definition of a customer is expected. They expect to have metadata, which provides information about the data. Metadata should tell what the data means and how it can be used. Also, it should contain the information whether the correctness of the given data attribute is known. Employees also expect to increase overall trust to data and improve knowledge sharing among different parts of the company from the organization of data governance.

From data governance structure point of view the employees expect the ownership and responsibilities for handling customer data. They should be organized in a way that needs of the different parts of the organization are taken into account and silos are avoided. Company-wide participation to data governance work is expected as well as support and commitment from top management. Respondents also stated that the case company should avoid building supernumerary hierarchy and bureaucracy when organizing data governance. The decision-making should be straightforward in data governance.

2. How do the employees expect the organization of data governance to benefit implementation of automated marketing capabilities?

This case study indicates that the employees expect the organization of data governance to improve triggered and automated customer lifecycle management that is based on the individual customer's life-situation. The respondents expect the organization to be able to automatically identify from the customer data what is the most likely offer customer could accept in each customer interaction and display this information automatically to the customer or the sales person who is handling the customer interaction.

The organization of data governance is expected to solve problems in customer data quality that are currently hindering implementation of automated marketing capabilities. Employees expect to gain better view in an individual customer's

customer relationship development over time. Also, currently an individual customer may be stored in different way within the same CRM system or in the different CRM systems the case company is using. This is seen problematic for implementing automated marketing capabilities and organization of data governance is expected improve the situation. Also, the organization of data governance is expected to provide common understanding of the needs of the different business units in the case company. This is seen to benefit implementing automated marketing capabilities as well.

7.2 Managerial Implications

As this was a single-case case study conducted in one Finnish ICT-company, the generalization of the findings needs to be done carefully. Also, as previous research states, the organization of data governance is depending on organization specific contingencies and therefore the organization of data governance should be designed by taking into account the characteristics of the organization at hand. (Weber & al, 2009; Otto, 2011b) However, organizations that are storing and utilizing customer data for different purposes can most likely find useful information from the findings of this thesis. If an organization is planning on implementing automated marketing capabilities, this thesis can be used as a reference of issues that should be taken into account when organizing customer data to support automated marketing. Also companies that are planning the organization of data governance or have already started data governance work could refer to the findings of this thesis as a reference of different aspects data governance activities could improve.

The findings from this case study can provide valuable information for the case company. The case company had defined goals to improve customer experience, to increase value of existing customer base and take into account legal aspects of handling the customer data. Also the case company had identified a need for creation of company-wide data standards for the customer data. The findings indicate that the employees of the case company expect the organization of data

governance to benefit the case company in reaching these goals. The respondents expect benefits for the better means of doing cross- and up-sales from the organization of data governance. All other areas of defined goals are also visible in the findings.

The findings clearly indicate that there are expectations for the improvement of operational efficiency and data quality. These seem to cause frustration and inefficiency especially on the operational level. As the Senior Business Analysts, Data Manager and Customer Data Analysts indicated, they feel like currently they have to spent lot of time working on things they perceive meaningless. By organizing data governance the respondents expect they can work more efficiently and to benefit more the case company. Also interesting from the case company's point of view could be the expected gain in overall trust to data and improvement in knowledge sharing within the company. In order to succeed in implementation of automated marketing capabilities, the organization of data governance is seen important or even crucial by the employees of the case company.

The findings of this thesis could be used in the case company to follow up whether the efforts in organizing data governance are delivering the expected benefits. Also, the case company can see from the findings the things that are causing inefficiency. Focusing on the organization of data governance in order to fix these things, the company could improve operational efficiency significantly.

7.3 Theoretical Implications

This thesis used a theoretical framework that is based to The Morphology of Data Governance (Otto, 2011b) to interpret the findings of the case study. The concepts introduced in The Morphology of Data Governance were tested in six mini case studies at the time. This case study provides in depth analysis of one case company and their expectations of the benefits that organizing data governance should bring to the case company. The findings show that the two aspects of data governance, goals and structure, can be found in the expectations of the selected members of the case company. The findings of the case study also displays that

the expectations of organizing the data governance have more and different aspects than the one's found in the six mini case studies. This case study shows that goals of the organization of data governance have strong link to the case company's strategic goals. Also the expectations on improving the operational efficiency are strong. As a new aspect the case study shows the expected improvement in knowledge sharing within the case company. From data governance structure point of view, the case company are expecting to have commitment and support from the top management and that the organization has company-wide participation avoiding creation of silos. Findings also indicate that the employees expect more decentralized decision-making processes in data governance, which was not the case in the six mini case studies.

Automated marketing as a research area is new. The importance of the data and the way it is utilized has been brought up in previous research. (Hansotia & Rukstales, 2002; Polcari, 2014) However, there are not available research on how the data should be organized in order it to be utilizable for automated marketing activities. This case study provides insight how employees expect organization of data governance to benefit implementation of automated marketing capabilities.

On a more general level this thesis can be seen as a discussion opener for data governance being an enabler for automated marketing. In data governance community the marketing is not generally seen as an area of improvement the data governance activities are aimed. In the survey of current status of data governance among practitioners conducted in 2007, only 5 % of the respondents indicated that marketing is one of the reported parties of data governance activities. (Pierce & al, 2008) Although findings of this case study do not clearly state that marketing should be leading function for organizing data governance, it displays that employees see strong linkage between data governance and automated marketing. This can be seen as a new aspect for data governance research, should the data governance be lead in the same function where the utilization of the customer data lead?

7.4 Critical Appraisal and Suggestions for Further Research

Even though this case study provides in-depth insight to the expectations of the employees from organization of data governance and how they expect it to enable implementation of automated marketing capabilities, there are few limitations that need to be addressed. As the Appendix 1 displays, there were available much more empirical data than what was used in this thesis. Although the saturation was gained with the selected interviews in the author's opinion, the findings could be different or there could be more findings if different or more interviews were selected for empirical data.

Second possible limitation is author's capability to view findings and the empirical research material objectively. The author has close relationship to the case company and the projects within the company. This limitation was tried to minimize by author's academic leave from professional life for the duration of thesis work. Nevertheless, there is a risk that the author of the thesis has subjective view on the topics of the thesis.

When making generalizations of the findings of this thesis caution needs to be applied. As this was a single-case case study the findings may not be valid in other circumstances. However, the organizations that are storing and utilizing customer data in different ways can find the findings of this thesis useful. For research areas of data governance and automated marketing this thesis works as a discussion opener for viewing these subjects together.

As this thesis was looking into expectations of employees of the case company, a natural continuum would be a case study that would study how well these expectations have materialized after the organization of data governance in the case company. Other interesting research from the case company's point of view would be longitudinal case study research that would study how these expectations evolve over time.

Automated marketing as a research area is new and there is no prior research available of the organization of data governance and how it enables implementation of automated marketing capabilities. This thesis indicates that organization of data governance could be crucial in order to successfully implement automated marketing capabilities. More research is needed in the organizations that are implementing automated marketing capabilities. A research that compares organizations that have organized data governance to the organizations that have not organized data governance and study does it have an impact in the implementation of automated marketing capabilities could bring more information of this subject.

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APPENDICES

Appendix 1

A list of the interviews conducted in the case company during MDM work. The interviews that were selected for the empirical data in this thesis are marked in bold and italics.

Domain	Participant(s)	Date & Duration
<i>Marketing, Customer Communications & Online Development</i>	<i>Vice President</i>	<i>17.11.2014, 30 min</i>
<i>Marketing, Customer Communications & Online Development</i>	<i>3 Customer Data Analysts, Data Manager</i>	<i>18.11.2014, 1 hour</i>
Marketing, Customer Communications & Online Development	Customer Communications Director, Content Planner	28.11.2014, 1 hour
Marketing, Customer Communications & Online Development	Director of Online Sales, Development Manager	1.12.2014, 1 hour
<i>Business Unit A</i>	<i>Vice President</i>	<i>26.11.2014, 30 min</i>
Business Unit A	Development Director	24.11.2014, 30 min
Business Unit A	Business Manager, Development Manager	20.11.2014, 1 hour
Business Unit A	Business Manager	1.12.2014, 30 min
Business Unit B	Vice President	27.11.2014, 30 min
Business Unit B	Business Manager	10.12.2014, 1 hour
Business Unit C	Director of Business Unit	24.11.2014, 30 min
Business Unit C	Business Manager	20.11.2014, 1 hour
Business Unit D	Vice President	27.11.2014, 30 min
Business Unit E	Business Manager, Development Manager	1.12.2014, 1 hour
Legal Department	2 Lawyers	20.11.2014, 1 hour
<i>Business Analytics</i>	<i>2 Senior Business Analysts</i>	<i>18.11.2014, 1 hour</i>
Customer Service	Senior Development Manager, Software Architect	2.12.2014, 1 hour
Customer Service	4 Channel Developers	1.12.2014, 1 hour
Customer Service	3 Development Managers	2.12.2014, 1 hour

IT Unit	Director of Software Development, Head of Department	3.12.2014, 1 hour
IT Unit	4 CRM Architects	25.11.2014, 1 hour
IT Unit	3 Data Base Architects	26.11.2014, 1 hour
IT Unit	Head of Business Intelligence, 3 Development Managers	28.11.2014, 1 hour
Finance	Senior Business Controller	25.11.2014, 30 min
Corporate Business Unit	Project Manager	25.11.2014, 1 hour

Appendix 2

The Screenshot below is taken from NVivo. It displays how the contents of the transcribed interviews were classified according to the theoretical framework. All the answers from the interviews were classified to applicable subject. The sources represent interviews, there were four interviews of total eight informants used as an empirical material in this research.

The screenshot shows the NVivo software interface. The top menu bar includes Home, Create, Data, Analyze, Query, Explore, Layout, and View. Below the menu is a toolbar with various icons for editing and analysis. The main workspace is divided into several sections:

- SOURCES:** Internals, Externals, Memos.
- NODES:** Nodes, Node Matrices.
- CLASSIFICATIONS:** Source Classifications, Node Classifications.
- COLLECTIONS:**
- QUERIES:**

The central pane displays a hierarchical tree of nodes. The selected node is "Decision rights - Functional & Hierarchical". Below the tree, the "Reference" tab is active, showing a list of references with their coverage percentages:

Reference	Coverage
Reference 1	0.33%
Reference 2	0.41%
Reference 3	0.59%
Reference 4	9.61%

The detailed view of the selected node shows the following text:

V2: Miettien näitä vastuuta, me ei omisteta käytännössä mitään.. Se on niinku mun mielestä..

V2: Eli meidän pitäisi A roolittaa mitä me tehdään.. Hyvä kysymys pitäisikö meidän siirtyä MAVEn, mun ja Hannun?

V1: Esimerkiksi miten mä lasken asiakkaan aina ihan lennossa, jossain lasketaan ihan muuten vaikka vuosissa.. nää pitäisi vaan jonkun päättää, että näin tehdään..

K: Puhutaan asiakastiedosta, tuleeko teillä vastaan jos puhutaan tuotteesta, sopimuksesta, kun lasketaan jotain asiakkaan arvoa tai lisää ja ristiinmyyntiä.. onko niiden kanssa samat haasteet?

Appendix 3

The translations of the quotes presented in chapter 5.

Quote Number	Page Number	Original Quote	Translation in the thesis
1		..kun me ajattelemme asioita sitä kautta että miten asiakaskohtaaminen onlinessa, se pakottaa meidät tekemään oikeita asioita joka tehostaa meidän tekemistä ja parantaa asiakaskokemuksen laatua jokatapauksessa.	<i>..when we think from the perspective how the customer interaction is done in online it forces us to do right things which streamlines our doings and improves the customer experience in any case.</i>
2		Miten me parannetaan meidän kykyä kertoa asiakkaalle hänen elämäntilanteeseensa tai asiakassuhde mikä meillä on liittyvistä asioista relevantteja asioita. Me nyt vähän niinku pushataan asioita täältä, me valitaan aika massasti niitä kohderyhmiä, kun me haluttaisi päästä kiinni siitä että "hei kun sä oot juuri nyt muuttanut omaan luokkuun ja saanut uuden duunin..	<i>How do we improve our capability to tell about relevant things to the customer related to her or his current life-situation or customer relationship? Now we push things to the customers, we use big target groups, but we would like to be able to target individually to customers like "now that you have moved to your own flat and started in a new job...</i>
3		..ihan ne perusasiat jos laittaa kuntoon... että meillä ois suunnitelma siitä miten se asiakastieto ois osa kokonaisuutta.. ja sitten että nämä tiedot, niiden niinku päivittäminen end to end se on.. nää kaksi liittyy toisiinsa, eli se tiedon oikeellisuus ja tiedon päivitettävyys on ehkä sellaisia tärkeimpiä asioita.. kyllä mä nään että kun nää laitettaisi kuntoon niin moni muu asia siitä jalkautuisi..	<i>..just the basic things should be fixed.. that we would have a plan how the customer data is part of the big picture.. and the updating of it [customer data] works end to end.. these two are related to each other, the validity of the data and the ability to update the data, these are the most important things.. I see that if we are able to fix these, many other things would move forward.</i>
4		Mulla on suuria odotuksia tätä projektia kohtaan.. että me saadaan hyviä mittareita ja saadaan sitä toimintamallia. Kuitenkin tää on meidän	<i>I have great expectations towards this project.. so that we get good metrics [for data quality] and agreed ways of working. Nevertheless, this</i>

		<p>liiketoiminnan ytimessä, meillä on tää lisä ja ristiinmyynnin malli. Jos meillä ei ole asiakastiedot kunnossa niin ei sitä ole! Ja sehän on totta ettei se pelkkä asiakastieto mitään ratkaise vaan meillä pitää olla siihen liittyen tuotetieto, laskutustieto, sopimustieto, sittenhän siitä vasta syntyy se asiakkuuden hallintaan tarvittava tiedon määrä, eri dimensiot.</p>	<p><i>is in the core of our business. We have a model for cross- and up-sales. If the customer data is not correct, the model does not exist! And it is a fact that just the customer data does not solve anything, we have to have the related data in place as well, product data, billing data, contract data.. Then we have the data needed for customer relationship management, the different dimensions.</i></p>
5		<p>mä luulen että tällaisellä harjoituksella jos tää viedään päästä päähän me saadaan parempi yhteinen ymmärrys näistä asioista. Voi olla että mun päässä ei oo edes näkemystä miten vaikka <i>liiketoimintajohtaja</i> vastaa meillä sekä liittymä liiketoiminnasta ja palvelukehitysprosessista että miten hän on visioinut miten me viedään tätä eteenpäin jotta nää asiakaskohtaukset paranee. Mä luulen että tää auttaa kun meillä on tää governance ja standardit niin auttaa meitä näkemään asioita yhteisesti samalla tavalla.</p>	<p><i>I think that this kind of activity if it is done end to end we gain better common understanding. It can be that I don't have an understanding how for example the director of business unit A, what kind of visions he has for improving the customer interactions. I think that this helps, when we have this governance and standards, it helps us to see the things in similar way.</i></p>
6		<p>se että me ostetaan tai motivoidaan meidän asiakkaat kertomaan itsestään lisää niin sitä pitää tehdä hirveen systemaattisesti, jatkuvasti, kaikkissa asiakaskohtauksissa, siihen pitää panostaa hurjasti, mä en oikeen tiedä onko se pay off riittävä!... Sen sijaan että me paremmin, me kehitetään omaa kyvykkyyttä reagoida siihen mitä se asiakas meille</p>	<p><i>The concept of us buying or motivating the customers to tell more about themselves has to be done really systemically, all the time, in all the customer interactions and it requires enormous efforts. I don't really know if the pay off is going to be sufficient!... in stead we should improve our capability to react to what customer is telling to us with his or her actions.. for</i></p>

		<p>kulloinkin toimillaan kertoo.. Esimerkiksi että meillä ois asiakkaan tietoihin liitettynä se että mitä se on meidän webbisivuilla tehnyt. Mitä se on käynyt kattelemassa, se on jo arvokasta ja siitä meidän ei tarvii antaa sille edes vastiketta.</p>	<p><i>example, so that we would connect to customer data what the customer has done in our web-pages. What he or she has been looking there, that itself is valuable information and we don't even have to encourage the customer to give this information.</i></p>
7		<p>..meillä on hirveen paljon erilaisia käsityksiä joista osa on oikein, osa väärin ja osa harmaalla alueella ei oikein tiedetä että mitä tietoja me saadaan mihinkin tarkoituksiin käyttää. Jos lähetään meidän asiakastietoja rakeenteellisesti järjestämään, meidän pitäisi liittää jokaiseen tietoon metatieto siitä että mihin käyttötarkoituksiin tätä tietoa saa tai ei saa käyttää. Ja sitten luvat, yksiselitteisesti mikä mahdollistaa mitäkin.</p>	<p><i>..we have many different opinions about what data can be used to different purposes. Some of these opinions are correct, some incorrect and some in a grey area. If we start to organize customer data structures, there should be defined in the metadata of each customer data attribute to what purposes that data can or can not be used. And then the [marketing] permissions, unambiguous definitions what the permissions enable.</i></p>
8		<p>mä uskon hirveen vahvasti siihen että meidän pitää kohdata asiakkaita yksilöinä, ne on yksilöitä, silloin meidän [asiakas]tietomallinkin pitää lähteä yksilöstä. Ja siitä mitä palveluita sillä yksilöllä on ja ei ole, meidän pitää rakentaa tietoja.. se utopia olisi että meillä on pläni jokaiselle yksilölle, miten tätä yksilön elämässä helpotamme hänen elämää tarjoamalla oikeita palveluita.. mutta mitä se sitten käytännössä tarkoittaa?..</p>	<p><i>..I believe very strongly that we have to meet the customer as an individual. They are individuals and therefore our [customer] data model has to be based on the individuals. And what services this individual has or has not, we need to build information based on this. Utopia would be that we had a plan for each individual. How in the life of the individual we make his or her life easier by offering the right services... but what it means in practice?</i></p>
9		<p>Tietoa on paljon mutta ei kerätä.... Tää kokonaisuus mistä asiakas on jo ollut meidän kanssa jutuissa ja mistä asiakas on kiinnostunut,</p>	<p><i>There is lot of information but we do not collect it... This wholeness when customer has interacted with us, what the customer is</i></p>

		<p>niin se kokonaisuus yhdistettynä näihin tietoihin siitä käytöstä ja palveluvalikoimassaan tapahtuneista muutoksista.. niistä pystyisi jo päättämään tosi paljon kun vaan keräisi sen yhteen.</p>	<p><i>interested in. This wholeness connected to customer's usage and changes in the products the customer has.. From these we could reason lot of things, we just should collect all this data..</i></p>
10		<p>mutta sitten ku me ruvetaan katsomaan yksilöä, miten hänen elämänkaari, miten hän on mennyt opiskelijasta muuhuun.. se mun mielestä puuttuu? Meillä ei oo niinku sen yksittäisen asiakkaan [tietoa] miten hän elää ja miten hän on kehittynyt.. se, sitten kun me halutaan lähteä kohdistamaan juuri sulle ja katsomaan miten sun historia ja miten muut vastaavat ja jotain scorataan sinne.. tää puuttuu..</p>	<p><i>..but when we start looking an individual, his or her lifecycle, how it has developed from being a student to something else.. I think we are missing this? We don't have [the data] of the individual customer, how he or she lives and has developed.. and when we want to target just for you and look how your history and other things have developed and do some scoring.. this is missing..</i></p>
11		<p>..siis joo kyllähän näitä lisä ja ristiinmyyntiharjoituksia on tehty jo 2000 luvun alussa, mutta eihän niitä oo systemaattisesti johdonmukaisesti tehty ja nyhän ne jäi pois.. mutta teidän porukat nyt tekee niitä? (keskustelua..) Tavallaan puuttuu tällainen systemaattinen toiminta, jatkuvuus, oppi, se vaatii sitä että sä teet jotain, katot mikä tässä on hyvää huonoa, ja sit uudelleen.. tää on meiltä puuttunut niin kauan ku mä oon ollut tässä talossa, tää on epäsäännöllisen säännöllisesti vähän puuhasteltu, sitten se jää jostain syystä, en tiedä johtuuko se henkilöistä, järjestelmistä vai mistä, mutta se puuttuu..</p>	<p><i>..we have done cross- and up-sales activities already in the beginning of 2000, but these activities have not been systematic and now they were left out.. but some departments are again doing these activities? In a way, we are missing systematic and continuous way of working, it requires that you do something, look what was good and bad in it, and then do it again... this we have missed as long as I have been working here, we have irregularly done something and then it has gotten left out for some reason.. I don't know is it because of the people, the systems or because of what, but it is missing..</i></p>
12		<p>sit se mikä meillä tulee haasteena kun jotain muuttuu</p>	<p><i>..one challenge we have is when something is changed</i></p>

		meille se tieto ei tuu.. eli sit me ihmetellään miksi nää luvut näyttää oudolta.. no ku tääl tehtii yks muutos.. se on niinku yks mitä tuolla peruskalliossa tehdään mitä muutoksia siellä tehdään, määritelmä muutoksia.. se on niinku että se tieto ei kulje..	<i>and we don't get the information about that.. we spend time wondering why these figures looks strange... well, there was this change done.. the changes done in the bedrock, the changes in definitions.. that information is not shared..</i>
13		..se on se kun niitä lähteitä on niin paljon ja jokainen hake [tietoa] omilla standardeilla, se on katastrofaalista... Tai yhdistää kaikki [liiketoiminnan] tarpeet, ois se yksi data mistä löytyy kaikki tarpeet, nyt meillä on useita tarpeita ja dataja.. mitä järkeä on pitää kahta tai kolmee tai neljää erilaista asiakastietoa? Ei siinä oo mitään järkeä..	<i>..the thing that there are so many sources and everyone is fetching [the data] with their own standards, it is catastrophic... Or we should uniform the needs of the business, so that we had one data that serves all needs. Now we have many different needs and data, what sense does it make to have two, three or four different type of customer data? It does not make any sense...</i>
14		Juuri näin, että tulee kurinalaisuutta.. me ei olla todellakaan itse hirveen kurinalaisia, me tehdään vähän liikaa miten se meidän mielestä pitäisi olla.. tää luo sitten loppukäyttäjälle, voi olla että sama asia on kysytty teiltä ja meiltä ja sit tulee kaksi totuutta.. että tästä pitäisi päästä eroon.	<i>Exactly, there should be discipline... we ourselves are not working in a very disciplined way, we do too much things in the way we think is right... this shows for the end user... it can be that one thing is asked from you and from us and the result is two truths. We should get rid of this.</i>
15		Tavallaan tiedon ja tietämyksen, osaamisen jakaminen voisi olla helpompaa kun ei olla siiloissa. Päällekkäisen tekemisen vähentyminen kun ei olla siiloissa? Osaamisen parantumien.. näitä voi miettiä..	<i>In a way information and knowledge, knowledge sharing could be easier when we are not in silos. Reducing the duplicate work when we are not in silos? Increasing knowledge... one can think of these..</i>
16		Meillä on yleisesti kolme järjestelmää mistä vaikka mun	<i>In general we have three systems where for example</i>

		nimi löytyy. Yhdessä järjestelmässä lukee isoilla kirjaimilla tikkukirjaimilla, toisessa lukee isolla alkukirjaimilla toinen nimi mukana ja kolmannessa lukee sitten oikein.	<i>my name is stored. In one system it is stored in all capital letters, in the second system with first letters as capitals including my third name and in the third system it is correct</i>
17		Se on liian villiä.. Itseni näkökulmasta kun mä käytän kohderyhmämuodostamiseen sitä tietoa niin mä saan liian monta verisota. Mun ei pitäisi saada kuin yksi versio asiakkaasta mutta mä saan monta versioo.. Pikkusen kärjistäen sanottuna meillä ei oo minkäänlaista rotia siinä millä tavalla tietoja saa tallentaa..	<i>It is too wild.. From my point of view when I use the data to create target groups, I get too many versions. I should get only one version of each customer but I get many versions.. Little exaggerated, we don't have any discipline in the ways you can store data..</i>
18		..ja sitten on rooleja mitä me ei tiedetä tai tunneta.. Esimerkiksi tuotteella B ole tyypillisesti käyttäjiä vaan sulla on taloudessa tuote B ja puoliso ja lapset ja ketkä sattuu oleen paikalla käyttää sitä.. ja jos talouteen löytyy täysiikäisiä henkilöitä niin kaikille me ei voida sitä myydä vaikka kaikki ois saatavuuden piirissä jos joku heistä on ostanut sen.. Jolloinka me joudutaan tarkastelemaan eri tasolla asiakkuutta kun sillä sopijatasolla.. Joka taas edellyttää että tiedot millä me tunnustetaan mikä on yksi talous pitää olla paremmin standardin mukaisessa kunnossa mitä nyt on.	<i>..and there are roles we don't know or recognize.. For example Product B does not typically have user, instead you have the product in your household and your spouse, kids and whoever happens to be there are using it.. And if members of that household are of legal age, we cannot sell the same product to all of them because one of them has already bought it.. This means we have to look to customer relations on different levels.. which in turn requires that the data we have to identify a household has to be better standardized what is now..</i>
19		Enemmän itellä on ongelma sen kanssa että osaa ylittää käyttää työvälineitä. Mutat joo, levällään tuntuu olevan, sen takia se onkin haastavaa ottaa sitä duunia haltuun ku pitää oppia mitä löytyy	<i>More I have had problems to learn how to use the tools. But yes, things seem to be spread around, that is why it has been hard to start in the new position, because you have to learn where to find something..</i>

		mistäkin..	
20		Nimenomaan jos mulle annetaan toimeksianto mikä on ja kuulostaa tosi simppeliltä mutta sitten se toteutus on se että mie eka haen toisesta järjestelmästä ja sitten mie vie sen toiseen järjestelmään ja pyörittelen siellä ja sen jälkeen vielä pyöritteleen..	<i>Exactly, if I get an assignment that is and sounds really simple, then the execution means that I fetch the data from one system, take to the another system and twiddle with the data there and then twiddle some more..</i>
21		Mä sanon että ei tehdä itsemurhaa, ei lähdetä määrittämään standardia kuluttaja-asiakkaalle vaan standardoidaan yksittäiset tiedot.. Eli standardoidaan henkilötunnus, etunimi, sukunimi, osoite kaikki tällaiset asiat.. ja laitetaan kaikille asioille hierarkiat jotta ne voidaan liittää toisiinsa.. Joo visio mitä tavoitellaan kyllä, mutta ei sitä pidä naulata että se on nytten tämä! Standardien luomisesessa ennen kuin on detaljit standardoitu en lähtisi sitä ylempää tasoa määrittelemään että silloin tulee ongelmia vastaan..	<i>I say lets not make a suicide, let's not begin defining standard for consumer customer, instead we should standardize the single data elements.. I mean lets standardize social security id, first name, last name, address, all these things... and create hierarchies in order to combine the data elements.. Yes, the visio should be there, but it should not be nailed that it is this! In standardization, I would not start defining higher level before the details are standardized, that will bring problems..</i>
22		Se hyväksytänee että on standardin mukainen, sen perään pitää sitten saada se loki että on tarkastettu että toimii varmasti (sähköpostiosoite)	<i>We'll most likely accept that the data is according to the standard but after that we need the log that the data has been checked and it [e-mail address] works for sure..</i>
23		Nyt meiltä puuttuu sellainen että.. on se data ja on tieto että se data on oikein.. se puuttuu..	<i>Now we are missing that kind of.. So that we have the data and the information that the data is correct... that is missing</i>
24		Siis me ollaan hyviä, me ollaan oikeesti hyviä. Mutta me ei pystytä tekeen hirveen tehokkaasti asioita ja me joudutaan käyttämään.. meidän panos menee	<i>We are good, we are truly good. But we cannot do things really efficiently and we have to use... Our input goes to little wrong things, we have to do raw work to</i>

		<p>pikkusen väärään asiaan, me joudutaan tekee raakaa duunia kun me kerätään se data jotta me pystytään tekemään se kohderyhmä. Ja me ei pystytä juurikaan käyttää aikaa siihen että me ymmärrettäisi se data ja osattaisi tehdä hyviä kohderyhmiä.</p>	<p><i>collect the data in order to create a target group.. and we cannot spend hardly any time to try to understand the data and learn to do good target groups..</i></p>
25		<p>Se on tää asiakkuustoiminto. Minun mielestäni.. et jos kukaan.. kuka muu vois vastata meidän asiakkaan elinkaaresta kuin asiakkuustoiminto.. toki yhdessä liiketoimintojen kanssa.. aika siilomaisestihan liiketoiminta on asiakaslähtöinen, että kun tulet Viihde asiakkaaksi, mitä siinä eri vaiheissa tapahtuu he ovat hirveen kiinnostuneita siitä, mutta mä ajattelen sitä niin että asiakas on Elisan asiakas, jolla on viihde palvelut, kirja palvelut, mahdollisimman paljon palveluita.. niin se tuo sellaista konkreettisuutta siihen asiakkaan elinkaareen</p>	<p><i>It is this customer relations function.. in my opinion, if anyone.. who else could have a responsibility of customer lifecycle than customer relations.. of course in a cooperation with the business units. Quite silo like the business units are customer oriented, when you become a customer of Product B, what happens in different states, they are really interested.. but I think that customer is a case company's customer that is having Product B, Product C, as much as possible of our products.. That brings the customer lifecycle more concrete.</i></p>
26		<p>No varmaan kaikista tulosityksiköistä, että tota bisnesownereita joidenkin tuotealueiden näkökulmasta tarkastelee asioita, myynnistä, tietysti asiakkuusviestinnästä, asiakaspalvelusta..</p>	<p><i>Well, most likely from all the business units.. so that business owners are looking things from the point of view of particular products, sales, naturally customer communications, customer service..</i></p>
27		<p>Hyvä kysymys.. ei varmaan yhdenkään meidän liiketoiminnoista, koska silloin se menee sellaiseksi suppiloksi.. meillä pitäisi varmaan olla joku ottamatta kantaa yhtään siihen mikä se nykyisistä tai tulevista organisaatiosta on, joku joka katsoo sitä asiaa läpi koko..</p>	<p><i>Good question... it should not be any of our business units, because then it will be in a silo.. Most likely we should have some instance, not taking any stand which of the current or upcoming instances it should be, that looks the subject through out the whole.. In a holistic way,</i></p>

		<p>holistisesti, koska muuten meillä jää aukkoja näihin juridisiin asioihin.. Tärkeintä on se että sille on määritelty omistajuus, kuka se on beats me.. eikä oikeestaan hirveesti väliäkään!</p>	<p><i>otherwise there will be holes in the legal aspects.. The most important thin is that the ownership is defined, who ever it is, beats me! And I am not that interested in it..</i></p>
28		<p>..joku vastaisi hengellään tästä asiasta tappiin asti näin kärjistetysti sanottuna.</p>	<p><i>..to state this in exaggerated way, someone should put their life on line for this thing through out the company</i></p>
29		<p>Mä oon tässä nähnyt erilaisia malleja ja muita ja sekasotku on aina ollut enemmän tai vähemmän sama. Mun mielestä se on kysymys tahdosta ja henkilöistä. Jonkun pitää ottaa se pallo itsellensä, sen voi piirtää vaikka mihin organisaatioon.. mutta jonkun pitää innostua ja olla siitä vastuullinen ja mitä vähemmän on erilaisia portaita sen parempi. Mutta siinä pitää olla kaikki sidosryhmät mukana päättämässä niitä asioita. Ei se voi olla että sitä katsotaan vain yksi silmäisestä tästä näkökulmasta, että sitten jää nää kaikki muut jotka tarvitsee näitä niin niiden tarpeet huomiomatta.</p>	<p><i>I have seen here different models but the mess has been always more or less the same. In my opinion it is depending on the will and the people. Someone has to take the ball, you can draw it to whatever organization... but someone has to get excited about this and be responsible, and less we have hierarchy, the better it will be. But there have to be all stakeholders involved in decision-making. It cannot be that these things are looked only from one point of view and then all these others who needs these, their needs are ignored.</i></p>
30		<p>Sit toinen näkökulma että johdon pitäisi sitoutua tähän, Johtaja näkee [tärkeyden] että se voi päättää että ne sitoutuu.. Mutta tietenkään se ei voi niitä ykistäisiä ihmisiä ja tekemistä muuttaa miksikään.. et tässä talossa on kuitenkin teknisellä puolella on osa porukasta ollut helvetin pitkään ja niillä on rakkaussuhde siihen asiakastietojärjestelmään..</p>	<p><i>Then the another point of view is that top management should commit to this. When the director sees [the importance], he can decide that others will commit also. But of course he cannot change individuals and their doings.. In this company part of the staff on the technical departments have been working here long as hell and they have a love relation to that CRM system..</i></p>
31		<p>Nousee, on se noussut mun puskevana sinne. Että se on</p>	<p><i>It comes up, I have pushed it there. It has came when we</i></p>

		tullut tän kun me ollaan mietitty tätä online kyvykkyyden rakentamista niin sehän tulee mun työpöydälle säännöllisen väliajoin ku meillä on sitä ja tätä ja mä aattelen kaikkia visioita mitä meillä on asiakkuuksien hoitomalliin liittyen joka lähtee siitä että ne viestit ois triggeröityjä ja se asiakkaan elinkaaren tai elämänvaiheen mukaan eikä sen mukaan mitä nyt tuotepuoli haluaa myydä.. niin kyllähän tää on tosi kriittinen asia..	<i>have been thinking of developing online capabilities, it comes to my agenda continuously when we have this and that and when I am thinking of all the visions we have regarding the customer's lifecycle management which is based on that the messages would be triggered and based on customer's lifecycle or life-situation and what the product departments want to sell... yes, this is very critical thing..</i>
32		Se mikä meidän pitää tunnistaa niin että mikä tämän asiakkaalle olisi todennäköistä helpointa myydä just nyt. Jos meillä olisi 10 kpl erilaisia juttuja mitä me voidaan sille myydä, niin faktisesti se asia mikä meidän pitäisi pystyä kertomaan suoraan webbisivulla asiakkaalle tarjouksena ja toisaalta meidän myyjille myyntikanavissa.. tästä valikoimasta, mikä on todennäköisemmin se mitä asiakkaalle kannattaa tarjota..	<i>What we need to identify is what would be the easiest to sell to this individual customer right at this moment. If we have 10 different things that we can sell, what in factual would be it, that we should be able to tell to the customer as an offer on our web-page and on the other hand to our sales persons in different sales channels.. from this selection, what is the most likely the offer that is worthwhile to offer to that customer..</i>
33		Mut sitten se että me aletaan katsomaan hyvinkin että, tämä yksilö, miten sen käyttö, päätelaitteet ja muut, miten ne elää ja pystyä llähteä kohdistamaan.. Se puuttuu!	<i>But then we start looking like this individual, how it's usage, devices and other things, how they have developed and then ability to start targeting... This is missing!</i>
34		Tälläsessä listatekemisessä ehkä joo.. mutta sit jos me joskus tehdään tälläistä päätöksentekoa, logiikkaa datan päällä, sit se on ongelma jos ajatellaan niin, jos sä teet soittolistan tai minkä tahansa kampanjan ja	<i>In this kind of target group work maybe yes.. but then when we at some point do this kind of decision-making, logic on top of the data, then it is a problem. If we think that you make a target group or whatever campaign and</i>

		<p>ajatellaan että joku henkilö tulee valituksi koska sillä on joku tietty palvelu ja sitten tehdään joku toinen kampanja, mihin pannaan joku toinen kriteeri, se sama henkilö voi joutua sinne uudestaan vaikka näyttää eri henkilöltä. Koska oikeesti meidän tarkoitus on suodattaa se pois koska sille jo viime viikolla tarjottiin.</p>	<p><i>we think that some individual is selected because he or she has some specific service. Then we make some other campaign with some other selection criteria and the same individual gets selected to that again because he or she looks like different person. In reality our intention is to filter that out because he or she was already targeted last week.</i></p>
35		<p>Sitten tulee se jos tiukasti katotaan asiakkaasta, nimi, henkilötunnus ja osoite, mutta heti kun sitä aletaan laventamaan, tulee sähköposti ja muuta mukaan.. henkilö on voinut eri yhteydessä antaa toisen sähköpostiosoitteen kuin toisessa yhteydessä. Tai sitten se on voinut antaa saman sähköpostiosoitteen ja toisessa yhteydessä siihen on kielletty markkinointi ja toisessa sallittu.</p>	<p><i>Then comes the thing that if we strictly look at the customer, name, social security id and address, but as soon as we start expand it then comes e-mail address and other things involved.. An individual may have given in different instances different e-mail addresses.. Or he or she may have given one e-mail address and in one instance the marketing to that address have been denied and in other instance allowed.</i></p>