Comparing digital marketing platforms

Helping companies decide between going with an enterprise marketing software or settling with a minor one

MAIN FIELD: Digital marketing software

AUTHOR: Willy Larsson

SUPERVISOR: Kim Lood
This bachelor’s thesis was performed at the School of Engineering in Jönköping within the area of digital marketing. The author takes responsibility for presented opinions, conclusions and results.

Examiner: He Tan  
Supervisor: Kim Lood  
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Abstract

The desire for digital marketing has rapidly grown. The consequence of this has been an increased supply of digital marketing software providing the desired tools. This leads to a need for different types of software, where both enterprise platforms and minor one’s have risen. Both types come with opportunities and disadvantages, which need to be taken into account when deciding digital marketing software.

The purpose of this study is to assist companies in choosing the correct digital marketing software that meet their needs. The research focus on clarifying what differs an enterprise software from a minor one. The research is based on company needs, where time consumption, cost, integration complexity and software functionality have been analyzed.

A case study has been performed at the company Improove AB. The case study contained a literature study, interviews and an experiment. With these methods a lot of data could be collected, which consequently led to a thorough analyzation.

In the end, it was found that a minor marketing software is severely less time consuming. An enterprise software is more expensive, and it is in addition more complex to integrate than a minor marketing software. The enterprise marketing software triumphs when it comes to provided functionality, both regarding supply and possible configurations. With this knowledge it was determined that it is almost always preferred to integrate a minor marketing software, instead of an enterprise software. The reason for this is mainly that the integration complexity increases the time consumption, which increases the cost. Another reason is that it is crucial that the company using the digital marketing software takes advantage of all provided functionality, which they rarely do.

From the research it is possible to make educated decisions when deciding between digital marketing platforms. Whether an enterprise software is preferred or if a company should instead settle with a minor software is further explain in the thesis report.

Keywords – Digital marketing software, integration, enterprise, Salesforce Marketing Cloud, Klaviyo
Foreword

Special thanks to both my examiner He Tan and my supervisor Kim Lood for valuable feedback.
# Table of contents

**Abstract ................................................................. i**

**1 Introduction .......................................................... 1**

1.1 BACKGROUND ........................................................... 1

1.2 PROBLEM DESCRIPTION ............................................... 4

1.3 PURPOSE AND RESEARCH QUESTIONS ................................... 6

1.4 SCOPE AND DELIMITATIONS ........................................... 7

1.5 DISPOSITION ................................................................ 7

**2 Methodology and implementation ........................................ 8**

2.1 CASE STUDY ............................................................... 8

2.1.1 Experiment .................................................................. 9

2.1.2 Literature Study ........................................................ 10

2.1.3 Interviews .................................................................. 10

2.2 CONNECTION BETWEEN THE RESEARCH QUESTION AND IMPLEMENTED METHODS .................................. 11

2.3 WORK PROCESS AND APPROACH ...................................... 12

2.3.1 Experiment .................................................................. 12

2.3.2 Literature study .......................................................... 14

2.3.3 Interviews .................................................................. 14

2.4 DESIGN .................................................................... 14

2.4.1 Experiment ............................................................... 14

2.4.1.1 Marketing Cloud ...................................................... 15

2.4.1.2 Klaviyo ................................................................. 15

2.4.2 Literature study .......................................................... 15

2.4.3 Interviews ................................................................ 15

2.5 DATA COLLECTION ........................................................ 15

2.5.1 Experiment ............................................................... 15

2.5.1.1 Klaviyo ................................................................. 16

2.5.1.2 Marketing Cloud ...................................................... 21

2.5.2 Literature study .......................................................... 26

2.5.3 Interviews ................................................................ 27

2.6 DATA ANALYSIS ............................................................ 27

2.6.1 Research procedures ................................................... 27

2.6.1.1 Qualitative data ....................................................... 27

2.6.1.2 Quantitative data ..................................................... 27

2.6.2 Research areas ............................................................ 28

2.6.2.1 Time Consumption .................................................. 28
2.6.2.2 Cost ............................................................................................................. 28
2.6.2.3 Integration complexity ............................................................................. 28
2.6.2.4 Software functionality ............................................................................. 29
2.7 CREDIBILITY ................................................................................................. 29

3 Theoretical framework ......................................................................................... 31

3.1 CONNECTION BETWEEN THE RESEARCH QUESTION AND THEORY .......... 31
3.2 DIGITAL MARKETING ..................................................................................... 31
3.3 DIGITAL MARKETING SOFTWARE ................................................................. 32
3.4 A MODEL FOR INTEGRATION COMPLEXITY .................................................. 33
3.5 BEST PRACTICE OF DIGITAL MARKETING TECHNOLOGIES ..................... 35

3.5.1 Email ............................................................................................................ 35
3.5.2 Social Media ................................................................................................ 36
3.5.3 Search Engine Optimization (SEO) ............................................................. 37
3.5.4 Analytics ...................................................................................................... 37

4 Empirics ............................................................................................................. 39

4.1 TIME CONSUMPTION .................................................................................... 39
4.2 COST ................................................................................................................ 39
4.3 INTEGRATION COMPLEXITY ....................................................................... 40
4.4 SOFTWARE FUNCTIONALITY ....................................................................... 41

5 Analysis ............................................................................................................. 43

5.1 TIME CONSUMPTION .................................................................................... 43
5.2 COST ................................................................................................................ 43
5.3 INTEGRATION COMPLEXITY ....................................................................... 43
5.4 SOFTWARE FUNCTIONALITY ....................................................................... 47

6 Discussion and conclusions ............................................................................... 49

6.1 RESULTS ......................................................................................................... 49
6.2 RESTRICTIONS ............................................................................................... 49
6.3 CONCLUSIONS AND RECOMMENDATIONS .............................................. 50
6.4 FURTHER RESEARCH ................................................................................... 50

References ............................................................................................................ 51
Appendices ............................................................................................................ 55
1 Introduction

E-commerce is growing rapidly, and it does not seem to slow down. In the year 2017, the total amount of global e-retail sales grew to 2.3 billion U.S. dollars from 1.85 billion U.S. dollars. There is a significant change in the sales between those years, however, it is expected to grow to almost 4.5 billion US dollars by 2021 [1], which is nearly doubled. The biggest reason for this is that technology is becoming more integrated into our daily lives. It is also an outcome of an increasing digitalized marketing strategy. The marketing process is also simplified, and businesses get a lot of functionality with the existing marketing platforms. Demand creates supply. Choosing which marketing strategy is right for a business differs depending on various factors.

This chapter provides a background to the study and the problem area the research is built upon. Further the study’s purpose and research questions will be presented. In addition, the study’s scope and the delimitations are defined. The chapter ends with a description of the structure that is used for the report.

1.1 Background

The rapid development of new technology has led to the era of digital marketing. Even though the keyword “digital” clarifies a lot, it is a broad subcategory of general marketing. It includes channel expansion, email automation, simplified data analytics and much more. In addition to the existing platforms for digital marketing, new technologies arrive frequently. Digital marketing is here to stay and complements traditional marketing in an extensive sense. A table from the article “Effectiveness of Digital Marketing in the Challenging Age: An Empirical Study” [2] present some of the complements.

<table>
<thead>
<tr>
<th>Traditional Marketing</th>
<th>Digital Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional marketing includes print, broadcast, direct mail, and telephone</td>
<td>Digital marketing includes online advertising, email marketing, social media, text messaging, affiliate marketing, search engine optimization, pay per click</td>
</tr>
<tr>
<td>No interaction with the audience</td>
<td>Interaction with the audience</td>
</tr>
<tr>
<td>Results are easy to measure</td>
<td>Results are to a great extent easy to measure</td>
</tr>
<tr>
<td>Advertising campaigns are planned over a long period of time</td>
<td>Advertising campaigns are planned over short period of time</td>
</tr>
<tr>
<td>Expensive and time-consuming process</td>
<td>Reasonably cheap and rapid way to promote the products or services</td>
</tr>
<tr>
<td>Success of traditional marketing strategies can be celebrated if the firm can reach large local audience</td>
<td>Success of digital marketing strategies can be celebrated if the firm can reach some specific number of local audience</td>
</tr>
</tbody>
</table>
One campaign prevails for a long time | Campaigns can be easily changed with ease and innovations can be introduced within any campaign
---|---
Limited reach to the customer due to limited number of customer technology | Wider reach to the customer because of the use of various customers technology
24/7 year-round exposure is not possible | 24/7 year-round exposure is possible
No ability to go viral | Ability to go viral
One way conversation | Two ways conversation
Responses can only occur during work hours | Response or feedback can occur anytime

Table 1.1 Traditional marketing versus digital marketing

Then why is it so important for companies that these complements, which digitalized marketing bring, are implemented and focused on? Why is it so important to follow the digital marketing wave? According to Aster Makonnen digital marketing is crucial for success within a company. Aster does not find the business strategy to be an option anymore since it is obligatory for growth and profit gain [3].

*Digital technology is changing the way consumers relate to products and markets. It is not just our computers that are being reprogrammed; it is customers themselves.* [4]

It is the authors Jerry Wind and Vijay Mahajan that emphasizes the impact digital marketing has on the consumers. They continue to explain how the consumers decide the market rules and the companies must play by them. But even if they do, success is not guaranteed since it is a difficult job to cover the various needs of non-homogeneous individuals [4].

It is clear that Wind and Mahajan did not find a distinct answer in 2002 to how marketers would be able to meet the consumers demands. They use the word “if” when talking about companies using marketing technology [4]. Today that word is deprecated when referring to this subject, rather the discussion is about “what” technology is being used.

Fast-forward 16 years from 2002, and a yearly report states that 6,829 different digital marketing products are available on the market, which is almost twice as many as two years earlier. This is summarized in a report called Marketing Technology Landscape Supergraphic [5]. The report focuses on how much and what is offered regarding marketing technology at the given time. In the report from the year before, 2017, they also provided statistical data on the different company types providing the service. 6.9% of the companies were enterprises providing enterprise systems, which meant they are either public or they have more than 1000 employees. 44.2% have less than 1000 employees or no funding data. The last 48.8% are startups, which are at any pre-exit stage and investor-funded [6].
A company that desires digitalized marketing will most likely choose between either a service provided by an enterprise company or an established company that have a lot of resources. This excludes almost half of the services, since too small companies do not have the experience or resources to handle a large project. Still, if the distribution from 2017 is the same in 2018, that leaves around 3,495 technologies to choose between [5, 6]. However, it is a significant change of scope and usually a company will not take all marketing software into consideration. By being able to narrow the decision down to a choice that is either exclusive to enterprise systems or to a smaller, but still established software, the decision process is streamlined.

Integrating a marketing software into a system that is trying to gain popularity is of importance for the success of outcome. Only striving to implement one marketing functionality is not recommended, since that limits the marketing potential and creates opportunities for the competition on the market. In an article featured on Forbes in 2018 [7], Saher Ghattas tries to figure out and understand the future of digital marketing. In the article it is stated that companies need to focus on a fuller stack solution. A complete integration where the infrastructure is designed to not only achieve sales but maintain them.

With the rise of digital marketing there had to be software supporting it. Not only does the software support digital marketing, it is in some cases completely dedicated to it. Not just one tool but the whole eco-system can be built with the integration of one software. As previously mentioned there exists a large supply of these platforms, which makes the choosing process a lot more difficult. The first step consists of deciding a good practice. This will be a decider in what software that is chosen. The functionality to implement the desired practice must exist. It should be designable and scalable to be able to target the client’s needs [8].

A marketing software can vary in components and overall provided functionality. The main goal is to automate processes that would previously, with traditional marketing, be troublesome. For example, creating streams that result in customer relation and generation of leads and sales [9].

The automation is powerful, however, from a Smart Insights study in 2016 [9], it was concluded that only 2% of the marketing software users apply the features that comes with it. Which might be a product of non-user-friendly and complex systems, or a lack of resources to implement the features. In turn, this leads to a high percentage of users expressing that they are unsuccessful in their implementation of marketing software.
As can be seen in the chart above the statistical data was improved, but still not satisfying the company’s expectations. The chart has not been updated for later years, however there is reason to suspect a positive change. From another chart displayed on Omnicore’s website collected data is showing an increase in money invested in digital marketing channels. An average of 50 percent increase in the most common features of a marketing software. This was the change between and 2016 to 2017 [10].

The fact that more money is put into marketing software is a sign of realization from the companies that it is vital for success. Although, it is also a sign of a confirmed expense of integration. Around 30% of the lifecycle costs that include both the development and later the sustainment is spent on integration [11]. This is trillions of dollars companies together spend each year around the world. Integration is acknowledged as one of the key contributors to distress in a project [11].

1.2 Problem description

The medium-sized company Improve AB offer tailored e-commerce websites to companies that want to stay ahead on the market. Staying ahead is accomplished by not only building a basic website, but also integrating tools built to empower the website, such as digital marketing software. Improve has had these extensions previously, but they have as of recently started to offer Salesforce Marketing Cloud to customers to handle the digital marketing, which differs from the current alternatives they provide. The difference is that Marketing Cloud is considered an enterprise platform. When discussing software, the term “enterprise” defines a solution that is built to handle all functionality within the problem scope. So, for digital marketing an enterprise platform should cover all steps of the marketing process. This contains making first contact with the consumer, creating sale possibilities and in the end constructing a relationship and remarket [12].
Marketing Cloud is consumer focused, which is especially achieved from a large data collection and integrated AI to make use of it. It is a software packed with functionality and aim to cover all digital marketing needs a company may desire [13].

This solution is expensive, and time consuming for the company and increases the cost for Improove’s clients. Since the software is new to the company no expertise within the platform exists. Marketing Cloud is packed with functionality but there are a lot of competitors, which might offer less but are simple, cheap and effective. Improove are unsure if Marketing Cloud is a good allocation of time and capital for them and their clients. Especially since other previously implemented platforms, such as Klaviyo, have worked excellently.

Klaviyo is not an enterprise software. However, they describe their platform as the following: *Enterprise-level power at entrepreneurial speed* [14]. The platform is e-commerce focused, with email automation as its foundation. This has evolved into a more complete marketing software, with expanded functionality. Even though the platform is growing it is important for Klaviyo that their integration remains time efficient and that the complexity is never an issue for the company buying their service [14]. This description of Klaviyo is as well a good description of other minor marketing platforms.

From Improove’s point-of-view, there are imperative aspects when deciding a marketing software. As mentioned, effort and costs are always important factors in businesses. In addition, it is crucial that the software integration happens smoothly and as effortlessly as possible. If this process is painful it will destroy the estimate, which in turn affects the budget and deadline. Finally, one vital factor is the provided functionality of the integrated marketing software. This is something that of course needs to be considered before making the decision, but also evaluated when the integration is completed.

The important aspects mentioned above are; time consumption, cost, integration complexity and software functionality. These are the points that employees at the well-established company, Improove, describe as imperative parts of the decision-making. Employees, with several years in the business, with experience regarding what has been proven to be successful for both them and their clients. “Success” was the keyword for why these decision factors were chosen, and the points apply to all companies faced with the issue this thesis aims to help. The points will follow the thesis, staying connected to the research question, and providing information of what a company values as important when deciding between various marketing platforms.

The problem Improove is dealing with is implicitly an issue that transcend a comparison of a few systems. It is in fact a large general problem, where companies are faced with the option of either choosing an immense enterprise software or a much smaller, but established marketing solution. The conclusions from this research mainly targets to help companies that are deciding between the two types of marketing software that are compared, the enterprise software and minor software. It
is especially applicable to companies that prioritize the same factors that are included in the research question. The companies this research aims to assist can vary in size and organizational structure. They also do not need to provide the same services as Improove, the only condition is that they are faced with the above-mentioned decision and that they can relate to the research question. Therefore, both digital marketing integration providers and clients of them can take lessons from the performed research. The chosen marketing platforms both compare to a lot of other marketing platforms within their size scale, which makes it possible to study a larger concern within the limitations of a bachelor’s thesis.

While the positive outcomes of using an enterprise system are clear, the obvious cons are overlooked. The common way-of-thought is that if the business can afford it, the business should buy it. This is how many companies have decided their investments in software but have in the end led to disappointment. The experiences have been explained in several articles [15, 16, 17, 18]. The mentioned issues with enterprise software are, among other; bad UX, where meaningless functionality has been prioritized, restricted customization and difficult integrations. In addition to this, having all software in one space creates a critical switch that can jeopardize the entire system.

This research is necessary because there are no previous scientific studies thoroughly comparing enterprise marketing software products to other marketing software products. It is simple to find information about what different functionalities are offered and the cost of it all. But if a company wants to make an educated decision a lot more factors need to be included. The complexity and time consumption of the integration are key factors when choosing the software. The comparisons also need to be more in-depth than the current non-scientific ones. This will narrow the scope and produce more detail for the decision that some companies find themselves up against.

1.3 Purpose and research questions

In the problem description an issue is stated that has been reported by the company, Improove AB. They also provide the important factors desired from a company’s point-of-view. By trying to find solutions to this problematic situation it was made clear it could be generalized. Because of that, the purpose of this study is to help companies that find themselves in a similar situation. Help them to make a researched and elaborate decision when choosing what type of marketing software to go with. The study aims to assist both suppliers, such as Improove, and end customers, such as Improoves’s clients. The reason for this is that they all are faced with the decision and that they all need to consider the same factors, the factors mentioned in the problem description.
To be able to provide the necessary information for a choice of this importance one research question has been constructed. It is the basis of the study and will answer the following:

*How does an enterprise marketing software compare to a minor one, based on a company’s needs?*

To answer the research question a case study will be completed at the company Improove AB.

### 1.4 Scope and delimitations
This study contains an elaborate comparison between the marketing platforms, Marketing Cloud and Klaviyo. Due to time limitation no other software will be compared and only base integrations will be implemented. They will both be integrated into websites built with the Salesforce Commerce Cloud platform. No other factors than those alerted by Improove will be considered.

### 1.5 Disposition
Here the following main chapters are listed and described.

**Method and implementation:** Explain what was done to achieve the results of the study. In addition to explaining what was done, this chapter elaborately describes the process. The methods used are constructed to answer the research questions.

**Theoretical framework:** Describes different theories surrounding the area and compare them. As the previous chapter this piece also has a direct connection to the purpose of the study. The chosen theories are relevant to the main field and provide texture to the research.

**Empirics:** The collected data is presented in a structured and highly-readable sense. This is the result of the performed methods of the study.

**Assessment:** Provides analyses of the report’s data collection. The analytics are made between the empirics and the theories from the theoretical framework chapter.

**Discussion and conclusions:** Constructs an overview of the results achieved and the analyzes of those. The whole work behind the study is summarized and reviewed. In the end of the chapter, conclusions based on the research questions are presented, and possible further research is suggested.
2 Methodology and implementation

This chapter initially describes why and how a case study, with both qualitative and quantitative data, was conducted at Improove AB to complete the thesis. The following subchapter makes the connection between the research question and the chosen methods. Further the work process within the research is described. The approach taken is evaluated to find both cons and pros with the method choices. Before the collected data is thoroughly explained the design of the methods is mentioned. The chapter ends by describing how the data was analyzed and, finally, a discussion regarding the validity and reliability of the completed implementation is presented.

2.1 Case study

To complete the research a case study was carried out at the company, Improove. The approach was implemented because of the desire to gain in-depth knowledge about a specific area. Since case studies are preferred when a large sample population is near to unobtainable, and instead a practical solution is possible to take its place, this methodology fits the research question perfectly. The methodology also allows an insight view of the questions surrounding the area, and most importantly, provides realism to the researched issue [19].

A case study is most commonly conducted when you want to understand what and why something is happening and gain insight from the gathered knowledge. The term for this type of study is “exploratory”, and is in this research comparable to the completed integration testing of software [20].

However, this is only a significant indicator of a case study, the research method is not restricted overall. On the contrary it encourages the usage of several tools to gain both quantitative and qualitative data [20]. This allowed a multi-method research with three different approaches to collect data.

When planning the research, the followed steps were those recommended for a case study. The bullet list is provided in a report by Per Runesson and Martin Höst [20], which is dedicated to explaining the guidelines of a case study done in the area of software engineering.

- Objective – what to achieve? Both from the single company’s point-of-view, but also a more generalized perspective. In this thesis the objective became to assist Improove and their clients in their decision-making regarding marketing software. It was from this generalized to become of use for all companies facing the same problematic situation.
- The case – what is studied? Two different platforms that generalize their type, one for “enterprise”, and one for minor marketing software.
- Theory – frame of reference. Important to support the practical work and lead to the structure of chapter three, “Theoretical Framework”. This is common
within case studies, where the literature is used as extra evidence to prove the experimental work.

- Research questions – what to know? In this case only one research question but built from different components. The layout is formed from case study standards, where few objects are investigated, but with several methods.

- Methods – How to collect data? Where it was concluded that not only one method would cater the research question. A consequence of using case study as the framework, since it relies on thorough conclusions, based on the realism of the case. The type of conclusions that rarely is elaborately defined by only one investigation method.

- Selection strategy – where to seek data? The experimental part was given by the company where the case study was performed but tweaked for improved performance. Interviews are preferred to give more insight within case studies, and the interviewees came naturally from the company the case study was performed at. Since the literature would be used as supportive evidence later in the conclusions, the sources were carefully chosen. Scientific reports were prioritized, while as complements, less formal sources were chosen when needed.

The advantage of following a planning list is to build a firm ground for the upcoming work process. It assists in reducing the faults made through collecting data using several different methods. Knowing what to look for and how makes it more difficult to miss vital parts of the procedures. The list describes how the study follow the guidelines of a case study, at least up until chapter 4. From there the data in a case study is analyzed and reported. This will be done in this report by first, in chapter 4, reveal all the gathered data. Further, the data is analyzed in chapter 5, using best-practices designed for case studies, which is explained in chapter 2.6. Lastly, the performed case study is discussed and drawn conclusions from. As most case studies, the final result is constructed to enable further research [20].

2.1.1 Experiment

Performing experiments during the case study is common. It is listed in Runesson’s and Höst’s article on software engineering case studies, as one of the three major research methods. The same research describes the method as: measuring the effects of manipulating one variable on another variable [20].

In case studies the challenge is to document all the steps to enable reproduction, and it is important in a case study that everything concerning the experiment is well-defined [20]. This thesis adapted to that importance. Mostly through thoroughly documenting the performed integration, in chapter 2.5, and defining how the data was analyzed in chapter 2.6. This allowed the research to gain the possibility to be built upon. Making it reproducible and being elaborate in the writing process, the study can be furthered
by other researchers. This is one of the important outcomes of a report performed under the case study framework [20].

2.1.2 Literature Study

A case study is often initialized with information gathered from doing a literature study. However, in the end, the conclusions are often based upon the more practical work and backed up by previously obtained information from literature. When doing a software engineering study, like this one, the experiment and interview data is in turn prioritized [20]. Because of this the literature was chosen based on the practical parts, not the other way around. It was mainly gathered to support the software integration and give more meaning to the interview answers. Especially with theories and models presented by scientific studies.

2.1.3 Interviews

One of the major research methods within case studies is survey. It is performed to gather information from a population that has been carefully picked. Usually in a case study the survey data is collected though the usage of questionnaires or interviews. In this study several interviews were performed to obtain this type of information [20].

When carrying out interviews within the case study framework, the object is more important than the subject. Which means that the person being interviewed is not as important as what the person has to say about the case. Knowing that the interviewee’s opinions are valid is of course a necessity, but the case is the main focus when constructing the questions. This was considered when performing the interviews to best match case study standards [21].
2.2 Connection between the research question and implemented methods

The research question is limited by what a company described as the important factors when deciding marketing software. This is normal for a case study, where the problem description and desired data are often presented by the case itself. The factors are, as mentioned in the problem description; time consumption, cost, integration complexity and software functionality. These factors were compressed into one research question to better fit the case study framework. It allowed a precise investigation of a narrower area to occur, instead of expanding like other research methodology frameworks tend to do, with multiple research questions. As mentioned, the case study framework focus on narrowing down the research area but uses a lot of data to create an elaborate and realistic study. Several research methods were implemented to achieve this, which are stated below and how they were used to answer the research question.

To answer the first part, time consumption, time logs have continuously been updated for a fair and precise judgement. The time logs will be compared to the answers obtained from interviews, regarding what amount of time should be allocated for the
two different integrations. In the end time consumption will stand as a vital factor, since it affects all the other factors indirectly.

To answer the second part, development cost, the different platform’s websites have been visited. Where the websites have failed to provide pricing information, the interviewees have been asked to fill in the gaps. Here both the cost for the company doing the integration and the cost for the client using the software is investigated. Same as with time consumption, cost has connections to other factors, which is further described in the analysis made in chapter five.

To answer the third part, integration complexity, both platforms have been integrated with a functioning website. This provides the research with the possibility to investigate components, GUls (Graphical User Interfaces) and other different aspects that are vital for understanding the complete complexity. Through the literature study a theory has been chosen to provide another source of input. Questions about whether qualified developers are available for this kind of integrations, and if licenses and educations are required for usage, have been asked to the people who were interviewed. The answers were used to further evaluate on the integration complexity.

To answer the fourth part, software functionality, different methods have been implemented. Firstly, the finished integration displayed the possibilities with the systems. Especially the provided GUI, which can be navigated to find different functionalities. To avoid relying on the human interaction, the websites of the different software were thoroughly scanned to make sure everything was considered. In addition to the avoidance, a theory concerning this area is adjoined for a further source of knowledge. Everything is compared to what the interviewees and the literature states as important functionalities.

2.3 Work process and approach
This chapter explains the work process that led to the chosen methods. It gives an in-depth explanation to why specific decisions were made. Also, it provides a clear picture of how the work process was connected to the research aim.

Doing a research of this extent requires large amounts of data and generally it is preferred to not only have one method providing it. Because of this, three different ways of collecting information have been carefully selected to achieve the research goal. To some extent they contribute to the research question and exactly how is described under the sub headlines for this chapter. The overview is however shown in figures 2.1, 2.2 and 2.3.

2.3.1 Experiment
Comparing software integrations is simplified with a practical example to obtain experience from. The experiment has in addition given an elaborate estimation of the integration effort, in form of time consumption. Before implementing an integration and testing it, there are decisions needed to be made for a streamlined process. These
decisions are displayed in the first row of figure 2.4, showing the steps in their chronological order, first to last. The second row which the first one continues onto, are the practical parts that can be implemented when the ground decisions have been made.

Since the research is based on a problem description provided by a company the Marketing Cloud platform was initially given as outset. The compared software, Klaviyo, was to some degree chosen because the company providing the problem description had previous experience with it. However, the main reason for the choice was that, like Marketing Cloud, it had no complete back-end integration designed for Salesforce Commerce Cloud.

To give a fair comparison it was decided that the two platforms would both be integrated into an existing project with similar build. Due to credential limitations it had to be different projects, but this did not affect the integration tests since the projects are built on the same platform, Salesforce Commerce Cloud.

Given the marketing platforms it was an easy task to decide which language to use for the integrations. The projects are partly built with JavaScript and it is also the language that is used by both marketing platforms when giving examples in documentation. Because of this JavaScript was used for API communication with HTML code for connectivity with the actual websites built upon.

Due to time limitations and task revision it was decided that the testing would not be automated. Instead test data will be incrementally communicated to the different software. The responses will determine if the code is functional and if the next integration step can begin.

By continuously testing the integration phases it simplified determining when it was completed, and the knowledge obtained from the integration was at that point analyzed. Empiric data was gained and in the end of the report it was discussed, to finally provide conclusions based on the research question.
2.3.2 Literature study

Collecting data from existing literature was vital for the research question. It was chosen because it gives background to most segments in the research scope. It was used to provide theories regarding integration complexity and software functionality. These theories could then provide models, which made the integration findings more valuable and impartial. The literature also gives information about the capital demanded for software usage, which is part of the research question.

The work process when researching literature was to first gather a lot of sources. By doing this it was proved that enough previous knowledge existed to proceed with the study. Afterwards it was possible to elect only the most valid sources.

2.3.3 Interviews

Three employees from Improove AB were carefully selected based on their experience and knowledge regarding the research area. The employees are all high-ranked project managers with multiple years of experience from working at Improove, and from working with similar employments at earlier stages. Each person was individually interviewed for about thirty minutes, answering questions with open answers. The interviews are invaluable to the report. Not only did the answers set the whole basis of the research by supplying the company needs aspect. They will, in addition, make the study expand from a completely technical study, to a research where the business perspective is included. Working with both angels creates an elaborate report, that remains narrow enough for proper usefulness.

2.4 Design

What instruments were used to complete the experiment is explain in this chapter. In addition, it will be described what methods were implemented to obtain the literature knowledge. Further, a detailed formulation regarding the design of the interviews is presented.

2.4.1 Experiment

The two integrations were implemented on separate websites, built with the same platform, Salesforce Commerce Cloud. The company, Improove AB, where the study was performed, develop website on two different platforms, Salesforce Commerce Cloud and Magento. For a fair comparison, one had to be chosen, and due to credential restrictions Commerce Cloud was a better match. The code required for the integrations was written in JavaScript with some HTML for front-end connectivity. Visual Studio Code was used as code editor for both integrations. The two integrated marketing platforms, Marketing Cloud and Klaviyo both use APIs to communicate. Version control was handled by GitHub, which is a web-based hosting service.
2.4.1.1 Marketing Cloud

To fetch and send data Marketing Cloud makes use of two separate APIs. One REST API and one SOAP API. Both were used in the integration and testing process. The integration was built from an already existing GitHub project [22].

2.4.1.2 Klaviyo

Like Marketing Cloud, Klaviyo also communicates through two APIs. The APIs are categorized as one JavaScript API and one Server-Side API. Both were used in the integration and testing process.

2.4.2 Literature study

When searching for literature, Google was used as search engine. This enabled the use of different Boolean search operators. The sources were carefully chosen, while scientific articles were prioritized. Google Scholar, CiteXSeer and Microsoft Research were the portals used when searching for scientific articles.

2.4.3 Interviews

Three structured, open interviews were conducted to avoid simple answers and allowing the interviewee to elaborate. However, to have some sort of template to proceed from, a basic interview template [appendix 1] was created, containing nine questions. Using this template as basis, it ensured that the most vital questions were asked to all interviewees. The interviews were cased based, where the questions were company oriented and the answers grounded in personal opinions. The interviewees remain anonyms since their exact identities do not contribute to the quality of the research. The interviews were recorded to enable exact quotation and to remove the human memory factor.

2.5 Data collection

In this chapter the process of data collecting is documented. The completed experiment is step-by-step elaborately described. The reason for this is to provide the opportunity for others to recreate the integrations.

2.5.1 Experiment

Since the integrations are conducted by an inexperienced developer the process was thorough and no steps were excluded. The procedure was similar for both platforms. The account creation is not included in the experiments since they were provided and are not in the scope of the integration process.
By doing the following steps and completing the integration, the data will assist the research in answering the amount of time consumption required, integration complexity and which software functionalities are offered and how difficult they are to implement. Time consumption and software functionality is evaluated during the integrations to avoid forgetting anything. However, the integration complexity can only be fully evaluated after the integration has been completed, since the focus is on counting components, files, configurations and lines of codes required. How the obtained data is measured and analyzed is stated in chapter 2.6 (Data analysis). The actual collected data is later presented in chapter 4 (Empirics).

2.5.1.1 Klaviyo

Before writing any code and the actual integration was initialized, the documentation was studied. In the documentation for the JavaScript API [23], help code was supplied. By copying the help code, adding the correct API key and replacing pseudo code with dummy data, a first test could be initialized. How to retrieve the public API key was explained in the documentation [23]. Important information that was not clarified in the documentation is that invalid emails will not be registered. The code was implemented in the footer of the website so that the script will always run, since it is displayed on all pages.

In the same documentation page, Klaviyo provide a way to see if the script is running on the website where it has been implemented. All that is required is an URL to the targeted website.
If Klaviyo could detect the script using the provided URL it would present a success message.

![Success message from URL test](image)

By first checking that the script was functioning there was confirmation that the code in figure 2.5 could be triggered. For retrieving feedback based on the attempt the interface was visited. Navigating to the metric tab “Active on Site” and clicking on “Activity Feed” it is shown that the tracking was successful. Therefore, the most basic integration has been conducted, tested and acknowledged. Providing data as shown in figure 2.8 below, where “{email}” is the given customer identification and “{visited URL}” is on what URL the customer was identified.

![Klaviyo GUI showing that the activity was registered](image)

Continuing with the integration, the next part that was implemented was to test the email functionality. Before writing any code, I created all necessary material in the Klaviyo GUI. From the dashboard I navigated to the tab called “Lists & Segments”, chose to create a list and gave it the name “Newsletter”. Once this was done, the GUI offered an alternative to create a signup form. This alternative was clicked and next the interface presented a code snippet that could be installed to the website. In the script below the actual public API key has been replaces with the string “PUBLIC API KEY” to remain confidentiality.
Install signup forms

Step 1: Install the signup forms code on your website
In order to display signup forms and collect emails on your site, you need to copy the code below and paste it before the \</body\> tag on every page you want to display the forms.

```html
<script async type="text/javascript"
src="/static.klaviyo.com/onsite/js/klaviyo.js?company_id=PUBLIC
API KEY"></script>
```

Step 2: Verify your installation
Review the URL and click "Check my Install" below to verify that your signup forms code is correctly installed on your page.

Enter your website's address... Check my Install

Please view the installation documentation for more detailed instructions.

Figure 2.9 Klaviyo signup form installation [23]

The script should be added before the end body tag (\</body\>) on each page it is desired. In this case the script tag was implemented in the footer, exactly like the tracking. Under the code snippet it was once again possible to test the script by adding the URL of the website, which ensured the script ran and communicated with the API.

Further, once exiting the install guide another alternative to create your own signup form was supplied. By clicking “Create Signup Form”, giving it a name and choosing the option “Popup”, I could continue to the design. No extra design was added, and the signup form was saved and published, which meant it could be tested. To make sure no previous visits to the website would interfere, the website was opened in incognito mode in Chrome browser. The result was the following:

Figure 2.10 Newsletter popup
After entering a valid email and clicking the subscribe button, the email appeared in the Klaviyo GUI under the chosen mail list, in this case “Newsletter”. The actual email functionality had not been tested yet, since it was not connected to any email flow. That was the next step.

The GUI was once more visited, to connect an email flow to the signup form. From the dashboard, the tab “Flow” was clicked. By choosing the alternative to create a new flow, it was presented the possibility to choose a template from a library. The template “Welcome Series” was chosen and the list “Newsletter” was picked as the email trigger. Without doing any adjustments the flow was created and saved. Redoing the same test as previously from an incognito window the following email was received after submitting an email. Also, the old email was deleted from the subscription list to ensure it would be triggered again.

Since channel extension, for example social media, was concluded to be an important feature in chapter one, the next step was to view the possibilities. Not much was found that did not require a third-party software involved, or that was already built and presented as a feature. The one thing that was found was a drag and drop feature, which attached social media links to the email template. It looked like this after implementation:
The emails in the flows can, additionally, collect certain email related data. To test the tracking, the same previously created flow was used. Through navigation to the created flow in the tab “Flows”, and choosing the initially triggered email, options became available. In the newly open sidebar, under settings, “UTM Tracking” was enabled. Once again, the same test was performed, and like before, the test was done in an incognito window after the email was removed from the mail list.

The email that tracking was added to was not sent when trying the tracking. This was fixed by making the email live, instead of the default value “manual”. When redoing the test after the change everything worked.
Above is the analytics shown when clicking “View all Analytics” in the sidebar for
the selected email.

2.5.1.2 Marketing Cloud

Because the integration is with Salesforce Commerce Cloud this integration solution
was limited to that platform. However, if another platform is desired, code can be
reused to some extent. Marketing Cloud currently has no complete back-end
integration available and as base an unofficial GitHub project [22] has been used,
called Marketing Cloud Connector.

The repository contained a Wiki [24], which acts like an integration guide for the
Marketing Cloud Connector. It is divided into chapters, where the initial three
describe the basic initiation. I began with the Handler Framework chapter [25], since
it was recommended. The Handler Framework repository [26] is a separate GitHub
repository, which is implemented if you want to separate the connector code from the
initial code provided by Salesforce Commerce Cloud. The integration I did used this
cartridge to protect initial code and for easier customization in the future
implementations. However, it should be mentioned that the integration can be
performed without implementing the cartridge.

First, the Handler Framework project was cloned from GitHub using HTTPS, using
the most recently released version (1.0.0-rc.1). The cartridge named
“int_handlerframework” was added to the project and the modules folder as well. A
modules folder already existed in the initial project, which forced me to merge the
contents together, to be able to proceed. Immediately I uploaded the cartridge to the
Commerce Cloud storefront instance. Once this had been done a few settings had to
be imported to the Business Manager. These settings could be found in the
downloaded repository under “Handler Framework / sites / site_template”. The XML
file for custom objects located in the subfolder “meta” was edited so the objects were
not site specific. This was achieved by changing

“<storage-scope>site</storage-scope>”

to

“<storage-scope>organization</storage-scope>”

It is also important to change the folder structure so that the folder named
“SiteGenesis” has the name of your desired site instead. While this was not stated in
the GitHub Wiki, it caused a lot of issues. If the folder name is not changed, the files
under “\handler-framework\sites\site_template\sites\SiteGenesis\custom-objects”
must be manually imported under Merchant tools > Custom Objects > Import & Export.

The Handler Framework chapter contains two subchapters, where only one needs to be followed, depending on which architecture is used for the Commerce Cloud project. Both are straightforward and explain which lines of code need to be changed in the “int_handlerframework” cartridge for it to work on the existing project. For the integration done for the thesis the SiteGenesis architecture was used, and in turn those instructions [27] were followed. Except for this step, all other segments will be alike no matter what architecture the project is built upon.

The next chapter “Installation Specification” explains how to implement the main cartridge, called “int_marketing_cloud”. The initial steps were similar to the first cartridge implementation. The most recently released version (1.0.2.1) of the repository containing the cartridge was cloned using HTTPS. The cartridge was added to the existing project. Settings and data under the folder called “site_template” was imported to the Business Manager. However, before this, the site-specific custom objects were edited to be applied on an organizational level and the folder structure was adjusted, exactly like previous import.

The cartridges had already been uploaded, but for the code to work they had to be added to the cartridge path for the sites that will use the functionality. This was done by first navigating to Administration > Sites > Manage Sites in the Business Manager. Here a test site was chosen and then under the settings tab the cartridges were added to the end of the cartridge path string and applied.

The Marketing Cloud API can only be used if you have a client identification and client secret. These credentials are necessary for authentication and is created through the Salesforce Marketing Cloud GUI, under Administration > Account > Installed Packages. Once I was logged in, I located and selected “Create New App” and clicked “API Integration”. Here I followed the GitHub documentation, filled in the necessary fields, while especially making sure I picked “Link to Account”, and at least specified read and write permissions to “Send for Email” and “Data Extensions for Data”. However, this gave the error “API Permission Failed” later in the integration testing, so instead I decided to give my account full permission. Once all steps had been performed, I saved the page, since it contains the client identification and secret that will later be used in the integration process.

The first step after having followed the GitHub documentation was to complete the same initial task as with the Klaviyo integration – track a user. From the Marketing Cloud GUI, I navigated to Analytics Builder > Web & Mobile Analytics, which had a setup wizard. Initially it provides you with a script that should be implemented on
each page the tracking should happen. Since I wanted it to happen on every page, I put it in the HTML header. The code looked as the following:

```html
<script src="http://{MemberID}.collect.igodigital.com/collect.js"></script>
<script>
  _etmc.push(["setOrgId", "{MemberID}"]);
  _etmc.push(["trackPageView"]);  
</script>
```

Figure 2.14  Script that enables Marketing Cloud tracking

Where the actual member identification has been replaced with “{MemberID}” to remain confidentiality. The identification is automatically generated through the setup tutorial.

From the previous imports to Business Manager, a few parameters were created to provide the opportunity to deactivate analytics and tracking. To enable everything I navigated to Merchant Tools > Site Preferences > Custom Preferences in the Business Manager. I chose the Marketing Cloud group and enabled analytics and the tracking link. On the same page I added the Marketing Cloud member identification that was generated previously.

With these changes the tracking was initialized. The GUI now displayed several tracking attributes “Visitor Location”, “Page Popularity”, “Device Breakdown”, “Viewing Browser” and many more. These attributes could be filtered in various ways to maximize the analytical abilities.

The next implemented functionality was subscription to a mail list. To make sure all prerequisites were enabled, an email list was set up. This was done in the Marketing Cloud GUI, where from the dashboard “Email” was selected under the dropdown tab “Email Studio”. When the page was loaded, “Lists” was clicked in the “Subscribers” dropdown. Under “My Lists”, a new list was created with the name “Newsletter” and the external key field was filled in with the value “newsletter-external-key”. Since “My Lists” was preselected the list could be saved and immediately appeared in the GUI as a new list with zero subscribers.

The actual API communication was handled through two separate API calls, one REST API call and one SOAP API call. Postman [28], an API development test environment, was used to easily test the different API calls, however another tool specifically designed for SOAP API calls might be recommended when testing those calls. This approach of continuous tests is not necessary, but had to be done by me, since I had errors regarding the “API Permission Failed” error message. The REST API call was made to fetch an authorization token, using the client identification and client secret. To get a response from the server, only a few parameters had to be set. In the header of the request “clientId” and “clientSecret” had to be given the values that were previously retrieved. The API endpoint was
“https://YOUR_SUBDOMAIN.auth.marketingcloudapis.com/v1/requestToken”,
where “YOUR_SUBDOMAIN” was replaced with the domain that is used for your
account. The subdomain can be found under “Administration” in the Marketing cloud
GUI. When the call was completed, the response body was the following, where the
real token has been replaced with the string “AUTHORIZATION_TOKEN”:

```
{
  “accessToken”: “AUTHORIZATION_TOKEN”,
  “expiresIn”: 3479
}
```

Having the authorization token, it was possible to start testing the SOAP API call that
would in the end subscribe a user to an email list. The API call was constructed from
documentation supplied by Salesforce Marketing Cloud. After a lot of trial-and-error
the following envelope was achieved for testing:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sec="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
  xmlns:soapenc="http://schemas.xmlsoap.org/soap/enc/1.0"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soapenv:Header>
      <ws:Policy xmlns:ws="http://www.w3.org/2001/12/soap-policy">
      </ws:Policy>
    </ws:Security>
  </soapenv:Header>
    <CreateRequest xmlns="http://www.marketingcloud.com/api/partnerAPI">
      <CreateRequest>
        <client:CreateRequest xmlns:client="http://www.marketingcloud.com/api/partnerAPI">
          <listId>xsl:if="true"/>
          <listId>
            <ObjectID xsi:nil="true"/>
            <ObjectID>
              <emailAddress>VALID_EMAIL</emailAddress>
              <emailAddress>
                <EmailAddressKey>VALID_EMAIL</EmailAddressKey>
                <EmailAddressKey>
                  <listId>
                    <id/>
                    <listId>
                      <Attributes/>
                      <Attributes>
                        <Nameех>`FirstName</Nameех>
                        <Value>FREEZE</Value>
                        <Attributes/>
                        <Nameех>`LastName</Nameех>
                        <Value>FREEZE</Value>
                        <Attributes/>
                      </Attributes>
                      <Attributes>
                        <Object>
                        </Object>
                        <Attributes>
                      </Attributes>
                    </CreateRequest>
                  </CreateRequest>
                </EmailAddressKey>
              </EmailAddressKey>
            </emailAddress>
          </EmailAddressKey>
        </EmailAddressKey>
      </EmailAddressKey>
    </CreateRequest>
  </Body>
</Envelope>
```

Figure 2.15 SOAP API call that subscribes user to email list

All capitalized values need to be changed to valid values for the call to work. One
important note is that the email must have a valid email format, otherwise it will be
registered as spam and the call will not work. Also, the list identification was located
under “Properties” within the mail list called “Newsletter”, which was previously
created. In the header of the request a key “SOAPAction” must be set to “Create” and
another key “Content-Type” must be set to “text/xml”. The actual SOAP service
endpoint can be found under the “Administration” tab in the Marketing Cloud GUI.
The test above made it possible to figure out that the problem was within permissions I had previously set up when creating the client identification and client secret. With this knowledge I could go to the Business Manager, locate the “Services” tab under “Administration, go to “Credentials” and fill in the correct data for “marketingcloud.soap”. With this change the code was working out of the box. To view the functionality the controller function “MCSubscription-Subscribe” had to be run, which I did via the URL. The controller rendered a form template with an email input. By filling in a valid email and submitting it, the success was displayed on the website and after a couple of seconds in the Marketing Cloud GUI.

Like the Klaviyo integration, the next step was to send a triggered email send when a new subscriber has been added to the email list. This can either be handled by an API call or directly from the GUI. Since, the Klaviyo integration was done from the GUI, the same approach was done for Marketing Cloud. First, before any configurations were made, an email was created for testing. In Email Studio, under the tab “Content” an email creation was initialized. An already existing themed email template was chosen called “Newsletter 1”. It was given the name “Newsletter” and tracking was enabled for all links within the email, while all other fields were left empty, since they are automatically generated if no value is provided.

The test account I was using did initially not have the required permissions for this, which lead to me having to contact the people at Salesforce to activate this. When that was completed it was an easy configuration. Once again, I navigated back to the email list I had previously created, called “Newsletter”. Here “Manage Welcome Email” was clicked and then “Send welcome email” was clicked. To select a previously created email “Select” had to be clicked, which enabled the possibility to choose the email named “Newsletter”. Pressing “OK”, then “Save” activated the welcome email trigger and when I later tried to subscribe to the list again an email was sent to my inbox.
Like Klaviyo, Marketing Cloud had the ability to attach social media links to the email, which can be seen in the email displayed in figure 2.16.

To integrate more social media into the digital marketing strategy, Social Studio is available as add-on. In the beginning there were problems with credentials, and it was after several weeks solved, and access was granted. The social media functionalities are integrated with the desired social media channels and did not require any code. No specific test was attempted, instead the GUI was explored to view different possibilities.

2.5.2 Literature study

The quantitative data was partly collected from a literature study. The information was obtained from trustworthy sources, where the majority are scientific researches with acknowledged authors. The data was both collected to provide a background to the topic, but also to enable models and theories to be compared with collected data from the experiment and the interviews. The literature study helped to answer the
platform cost and what software functionalities are provided for the different platforms through scanning Marketing Cloud and Klaviyo’s websites. The software integration complexity and the functionalities within it gained value from the theories and models discovered from the literature study.

2.5.3 Interviews

Qualitative data was collected through three interviews performed with three different individuals that work at Improove AB. The interviews were unstructured and had open answers, which affected the data obtained by the answers. The interviews provided information on all factors within the research question. Time consumption and pricing information was given based on previous experiences by the interviewees. Integration complexity was mainly discovered from the completed experiment and questions regarding this area were more surrounding the area. To further gain knowledge about the provided software functionalities, the interviewees were asked what functionalities were preferred and had the most success after implementation.

2.6 Data analysis

The collected data must be analyzed to provide value for the research. How that process will look like is presented in this chapter.

2.6.1 Research procedures

The methodology of the research is in previous sub chapter divided into; the performed experiment, the literature study and the conducted interviews. These can be further generalized into two groups, qualitative and quantitative data.

2.6.1.1 Qualitative data

Interviews are a typical method used to collect qualitative data. This data is not as static and is often captured from “lived reality” [29]. In this case it was used to gather and analyze data from a company’s point-of-view. Exactly how the interview answers helped analyze the data is formulated in chapter 2.6.2. Bias is considered one of the issues when analyzing qualitative data and can lead to suspected invalidity. This can be considered a fault in the human factor of the interviewer [29]. To make the analyzation regarded as valid, the interviews were recorded. Through this measure, it was possible to make sure no interviewee’s opinion was stated if it had not been backed-up by another interviewee. In the end, this helped the analyzation of data.

2.6.1.2 Quantitative data

Analytics are best performed when qualitative data is complemented by quantitative data. One form of quantitative data collecting is participant observations, which in this study was an experiment. Quantitative methods can gather large amounts of data [29].
and in chapter 2.5 the process is shown. Referencing that chapter, it is elaborately shown how data has been collected, which makes it easier to analyze the result. Easier in the sense that most of the factors listed in chapter 2.6.2 are directly connected to how the experiment process went.

2.6.2 Research areas

Since the research question is based on company needs it is important to focus on this in the analysis. The prioritized factors when deciding which software to choose were stated by the company where the case study was performed. How those parts were analyzed is brought up in the following four sub chapters.

2.6.2.1 Time Consumption

A table [appendix 2] has been continuously updated to provide precise time consumption for each integration. The total time will be calculated for both integrations. In the analysis chapter the time consumption will be a vital factor when deciding if the provided functionality is worth the required effort. This will be analyzed by using existing literature of what functionality is preferably prioritized when it comes to digital marketing. With this information and with answers from the interviews regarding how much time a company might want to allocate on a task like this, it can be concluded if it is possible to fit all the desired functionality in the scope.

2.6.2.2 Cost

The data for this part will be fetched from the two compared platform’s official websites. In addition, the cost will be analyzed based on interview answers to get information to evaluate the prices based on a company’s point-of-view. The interviews will fill in all gaps regarding pricing, where the websites fail to provide the information.

2.6.2.3 Integration complexity

To analyze the integration, several measurements will be used. A straight-forward measurement is the amount of code lines required for the integration. They will, through a GitHub tool, be counted based on the following rules:

- Only lines with code written on them will be counted
- Loops and statements will use the same code row standard

Further the number of files that have either been created or modified will be counted. This is already measured by the used version control, GitHub. Only files are counted, the folder structure is irrelevant in this measurement.
The required components for the integration will be added up. To be able to analyze this, a definition of what a component is had to be stated. The definition is fetched from IGI Global [30].

1. Has a well-defined interface with dependencies that are specified
2. Can manage a single abstraction
3. Offers a predefined service
4. Has the possibility to communicate with other components
5. Consists of data that is private
6. Is reusable

Components can consist of other components, which makes nesting a possibility. All layers will be added to the total sum. In conclusion, all components, nested or not, will be counted. Lastly, the configurations that enabled the implemented functionality were included in the complexity analysis. This included both the configurations in the GUIs and the configurations in Business Manager. These were difficult to measure but were in the end analyzed by counting each configuration process as one configuration. This was a fair measurement since both integrations included the same functionalities. Further, every configuration that was different from the other integration was counted to find the dissimilarities regarding configuration complexity.

2.6.2.4 Software functionality

By looking at what the different platforms offer an initial comparison can be made. Further the platforms will be evaluated based on how well their functionalities compare to researched best practice from the theory framework chapter. Finally, the interviewees answers will be considered to obtain knowledge regarding a company’s focus on the matter.

2.7 Credibility

Gathering data from three different methods avoids the conclusions being partially drawn. Having a large quantity of literature and theories help to increase the research credibility. The interviews provided information directly from employees working with the researched subject and therefore the business aspect of the research question was further considered.

Regarding the integrations it was not the same website used as basis. However, the websites are built on the same platform, Salesforce Commerce Cloud, which made the integration prerequisites identical. The Marketing Cloud integration might be considered partial since it is also a service provided by Salesforce. However, when the integration was completed no back-end integration between Marketing Cloud and Commerce Cloud existed. Instead an existing GitHub project [22] was used to simulate the basis that is normally already implemented when working with an
enterprise software. The comparison was additionally made fair by choosing Klaviyo, since it also lacks a complete back-end integration with Commerce Cloud. Both platforms use two different APIs, and both provide documentation with JavaScript code.

The analysis is made by the same person using the same exact measurements, which gives the research credibility. Standards were used when evaluating the integration complexity. Time logs were always carefully and immediately documented for precise judgement.
3 **Theoretical framework**

The aim of this chapter is to explain theories connected to the thesis topic. The theories have a direct connection to the research question and can later contribute to more elaborate conclusions.

### 3.1 Connection between the research question and theory

When comparing these platforms, one of the most vital parts is the provided functionality. Because of this, it is a part of the research question. Below this segment the theory in chapter 3.2 aims to give a theoretical background to what is the desired functionality to have. Not only which functionality to have, but also how it is best practiced and what it should contribute to.

Another vital part is of course the complexity of the integration. This segment of the research question is modelled in chapter 3.4. Here, different criteria are measured to generalize the complexity of the integration. This theoretical framework will help give an impartial and elaborate conclusion to the integration difficulties.

Finally, to make sure the implemented functionality has a certain standard, best practices have been stated in chapter 3.5. Testing the possibilities with the integrated functionality and comparing it to best practices helps the platform evaluation. It also enables the research to clarify the complexity of reaching well-functioning digital marketing. In conclusion chapter 3.5 assists in evaluating functionality and integration complexity.

### 3.2 Digital marketing

Maintaining a connection with the customers is referred to as creating a “digital relationship” in the scientific article “Digital marketing: A framework, review and research agenda” (2016) [31]. To be able to grasp this relatively new way of using technology to market products and services, a large sum of models has been constructed. Every year new models arise to clarify what digital marketing is and how it is best practiced. In the same article mentioned in this paragraph, the writers P. K. Kannan and Alice Li have designed a model. Most of the researches that have been mentioned in the background chapter all imply that there is one main focus related to digital marketing. That focus is the valued customer, and this is also understood by Kannan and Li. For this reason, the model in figure 3.1 starts with describing the environment the company works within. How the customer is the center of the environment with smaller parts, such as collaborators, context and competitors surrounding it. Specifying what technologies, for example search engines, social media, platforms, and which strategies work to satisfy the consumer is therefore the first part of the model. The second box regards to the company. One of the parts is made up of the, in the business world, famous four Ps (product, price, promotion, place). In specific, how a company can turn the segments of the left box into a solid business strategy. It is also made up of the market research, which is connected and holds together the entire model. It is a necessary central part because of the
importance of analytics in digital marketing. It gathers information from what the consumer demand is at the given time. It analyzes the data and forms possible solutions for the company to improve the four Ps. When the business strategy has been constructed it is implemented and leads to outcomes, which is the third box. The box consists of what the outcome of the company decisions is. The market research is affiliated with this since is obtains feedback and from it concludes the result and forms the business strategy from the findings. Some of the feedback is related to outcomes such as value equity, brand equity, relationship equities, profits and overall satisfaction.

The model’s main goals are to clarify some of the issues that can erupt and where they lie. To aid companies in the understanding of what is most important and how it can be solved. Also, it helps to determine the value that market research has throughout the continuous process [31].

Figure 3.1  Overview of how digital technologies follow the entire business process

3.3 Digital marketing software
Marketing software is undeniably one of the fastest growing technologies. This software does not regain the money and time spent on the integration on the actual website or application. It exists to expand the presence and reach everyone that is not visiting your product or service at that exact moment. Utilizing the full potential is difficult because of the vastness of the software [32].
The software is built as a platform which includes the most essential requirements of digital marketing. It is packed with functionality and uses an interface for easier customization. The strength of the software lies in scalability and data storage [33].

As can be seen in figure 3.2 the system is complex and can be difficult to grasp. The segments should cooperate but remain valuable with their own functionality. The software achieves positive results when the automation is integrated. From this is possible to control the software and access the full potential [33].

![Overview of digital marketing software](image)

Figure 3.2 Overview of digital marketing software [33]

A platform that is this immense will, however, also be accompanied with various disadvantages. It causes integration complexities and software value is well-payed with effort. Once it has been decided to implement a platform, the risk of being locked down is increased. Finally, if a small amount of the provided functionality is intended to be used, then the integration might not be worth the capital spent [33].

3.4 A model for integration complexity

Since most integrations are severely different it can be troublesome to anticipate the workload. The opportunity to do this was however provided by researchers that constructed a general model for complexity estimation. More exactly it is a model for COTS (commercial off-the-shelf) software [34]. The model enables the possibility to retrieve values from experience and shape a visual representation that is less informal than own thoughts. It provides the completed experiment with credibility, while, in turn, simplifies the decision regarding which digital marketing software type various companies should integrate.
The model is rate based and is constructed with six criteria’s that are always included in integration analysis. They are the following:

- **Parameter Specification** – Which above all is directed to documentation and other information helpful for the integration.
- **Script Writing** – Basically essential code needed for the integration to happen. Can, for example, be calculated by counting code lines or function points.
- **I/O Report Layout** – Feedback given by the software. Bug report availability, log viewability and request response are all part of this criteria.
- **GUI Screen Specification** – The quality of interfaces shown both during integration and when it is finished and ready for usage. A large part of this criteria is the ease of use for the developer.
- **Security/Access** – What security measurements are included automatically and how complex it is to add on more.
- **Availability of COTS** – For example, if certificates or credentials are necessary for usage of the software.

The model is as mentioned rate based and is displayed as a table. The scale is; VL = Very Low, L = Low, N = Nominal, H = High, VH = Very High. They, in the same order, represent a complexity value from 1-5. In the right column of the table the values are logged and below the table the total sum of the complexity criteria’s is calculated.

<table>
<thead>
<tr>
<th>Tailoring Activities &amp; Aids</th>
<th>Individual Activity &amp; Tool Aid Complexity Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VL</td>
</tr>
<tr>
<td>Parameter Spec.</td>
<td>1</td>
</tr>
<tr>
<td>Script Writing</td>
<td>1</td>
</tr>
<tr>
<td>I/O Report Layout</td>
<td>1</td>
</tr>
<tr>
<td>GUI Screen Spec.</td>
<td>1</td>
</tr>
</tbody>
</table>
Security/Access Protocol Initialization & Set-up

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of COTS Tailoring Tools</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Total Points: __________

Table 3.1 Rate template for integration complexity

When the total points have been summarized there is another table deciding what the final complexity level is.

<table>
<thead>
<tr>
<th>5 - 7 pts</th>
<th>8 - 12 pts</th>
<th>13 - 17 pts</th>
<th>18 - 22 pts</th>
<th>23 - 25 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>VL</td>
<td>L</td>
<td>N</td>
<td>H</td>
<td>VH</td>
</tr>
</tbody>
</table>

Table 3.2 Final complexity rating

3.5 Best practice of digital marketing technologies

The existing marketing software programs use different strategies to reach the consumers. They also vary in provided functionality but implement one or more of the, further, explained tools. Knowing what the tools within them are supposed to achieve and how they do it helps companies to understand what is important to focus on. Obtaining estimates of the importance of different marketing functionalities can, in addition, be a decider of what type of digital marketing software is required for expected results. If the more exclusive functionalities are redeemed valuable, the enterprise software alternative might be further explored. Below a few of the most important functionalities are described.

3.5.1 Email

Damian Ryan explains in his book, Understanding Digital Marketing, that the studies made until 2017 consistently and unanimously agree that the return on investment (ROI) is approximately 38 dollars for each dollar spent. This makes email the most powerful marketing tool [25]. It is even ahead of social media that has been growing rapidly in regards of return on investment. One reason for the prevail of email marketing is, according to Teresa Piñeiro-Otera and Xabier Martínez-Rolán, its
adaptation to change. The tool has persistently adjusted to content and scope penetration [36]. Another reason is the reach that email has, with 5.6 billion registered accounts in 2018 [10].

The most important parts of successful email marketing are listed below.

- Knowing the emails arrive at the prospects mail inbox [37]
- Making sure the email is opened by the receiver [37], where the chance is increased by 14% if the email consists of a segmented campaign [10]
- Getting the prospect engaged, promoting a special action and diverting traffic to the desired location [37]
- Automation of the process [37]
- Avoiding the email being marked as spam [35, 36]
- Branding and maintain a good company image [35, 36, 37]
- Personalized content, such as order status [35, 37]
- Following laws regulating data protection [37]
- Persistently gaining new subscribers and maintaining old one’s [37]
- Tracking and analyzing consumer behavior [37]

Knowing what the most important parts of the most important digital marketing software functionality are, increases the possibility to achieve success. If a minor digital marketing software includes an equal email functionality standard as the enterprise software, the minor software gains rating.

3.5.2 Social Media

As mention above, social media as a way of marketing is growing rapidly in number of different platforms and users [36]. In 2018 the number had risen to 3.03 billion people, not far from half the world’s population. Even though social media is mostly associated with platforms, such as Facebook, Instagram and Twitter, a lot of different platforms have appeared and proved to be valuable for digital marketing. Amongst these are blogs, podcasts, Pinterest and YouTube [35]. Deciding which one to use for marketing is based on wanted outcome. The different outcomes are listed in the article Understanding Digital Marketing [35].

- Blogs: long-form reviews and articles.
- Instagram: creative image-led posts.
- YouTube: episodic content such as tutorials and reviews.
- Twitter: conversation drivers and new exclusives.
- Pinterest: inspiration-led pieces.
- Facebook: reach.

According to Digital Marketer’s article on digital marketing there are four stages to complete a successful social cycle. Listening, influencing, networking and selling, in
that order. Listening is about monitoring the consumer and responding accordingly. The next part, influencing, focus on sharing content that is valuable. To further share content it is desirable finding influential partners that have a social image, which is the stage of networking. Finally, the product or service needs to be sold and this is done by generating leads and making sure sales are happening to both current consumers and prospects [37].

3.5.3 Search Engine Optimization (SEO)

Most likely the products or services a company provide are not completely unique and competition is unavoidable. In this case the goal is to make sure to have as much attention as possible. Especially since 93% of the website traffic was driven by SEO in 2018 [10]. This can be achieved by SEO.

Google is the most used search engine by far [36] and its algorithms are not static. The engine learns each day using artificial intelligence and therefore making use of SEO is a consistent task [37].

Best-practice for SEO has been summarized in a 6-part model designed by Digital Marketer. The steps are in the order that follows.

1. Intent – Establishing what the prospect is looking for.
2. Context – Knowing what the prospect is searching for it is important to know why the individual is looking for it. What is the context?
3. Asset – Figuring out what asset will satisfy the search and get the hit.
4. Channel – Understanding that there exist more search engines than Google and spreading to all relevant applications
5. Knowing where the previously mentioned assets should lie and in which channel to optimize the result
6. Ascension – Finally create leads and sale by continuing to steer the consumer in a profitable path

3.5.4 Analytics

The above-mentioned marketing tools are difficult to improve if there is no statistical data showing their current performance. This is solved by applying analytics to the marketing technologies. Having the data summarized and visualized is important for knowing which tools are working and which tools need optimization.

The data can be collected from many locations and it can be differently detailed. The most commonly used metrics are number of visits, unique page views, bounce rate, pages per visit, traffic sources and conversion [35]. Other useful, a bit more advanced metrics are average session length and number of leads generated [37].

To know where the marketing is being effective it is important to know where the visitors come from. It is also of importance to know and understand why people
follow the marketing strategies and why some leave. In the end, it is optimal to gain suggestions based on the collected and summarized data [37].
4 Empirics

4.1 Time Consumption
To measure the allocated time for each integration a table [appendix 2] was created to keep track of time consumption. When adding the times, the total was different for the two integration. The Marketing Cloud integration took 54 hours and 43 minutes, while the Klaviyo integration took 23 hours and 26 minutes.

<table>
<thead>
<tr>
<th>Total Calculated Time</th>
<th>Marketing Cloud</th>
<th>Klaviyo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>54h, 43min</td>
<td>23h, 26min</td>
</tr>
</tbody>
</table>

*Table 4.1* Total time allocation for each integration

All the interviewees stated that they expect more time consumption for the Marketing Cloud integration. The reasons for this was the following, where two out of three of the interviewed people had the same reasoning:

- Marketing Cloud has much more functionality
- Klaviyo is more established and currently has a better ground to build from
- Marketing Cloud requires more knowledge before integration start, where education might even be needed

Two of the interviewees provided estimations of how much time was required to be allocated. The estimations are displayed in table 4.2 below.

<table>
<thead>
<tr>
<th></th>
<th>Interviewee A</th>
<th>Interviewee B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Cloud</td>
<td>100+ hours</td>
<td>100-150+ hours</td>
</tr>
<tr>
<td>Klaviyo</td>
<td>80 hours</td>
<td>80-120 hours</td>
</tr>
</tbody>
</table>

*Table 4.2* Integration time estimations provided by interviewees

Taking the average of interviewee B’s answers and dividing them with interviewee A’s answers, it was possible to get a difference in percentage. This means, that according to the interviews, both estimated that the Marketing Cloud integration would take 25% more time to complete. From the actual completed integrations, the percentage difference was instead found to be that Marketing Cloud took 134% longer time to finish.

4.2 Cost
The people that were interviewed all said that Marketing Cloud is more expensive. Stating an exact figure for either of the marketing platforms was difficult but was answered by the end of the interviews. Using averages of the interviewee’s answers, it was concluded that Marketing Cloud is more expensive for both the company doing the integration, and the client buying the software. Marketing Cloud costs around 150.000 Swedish crowns for the company providing the integration service, and then the customer pays around 200.000 Swedish crowns for the complete standard integration.
For Klaviyo the pricing is as mentioned cheaper. Here it is expected that the costs are lowered by 25 percent, based on the completed interviews, for both the company providing the service and the client. This means that the company integrating the platform pays around 112,000 Swedish crowns, while the client pays around 150,000 Swedish crowns.

These costs are only the initial payments, since it will later be yearly charges for the license needed to use the services. For Klaviyo a pricing scale is provided on their website, but only up to 150,000 users, they then display contact information that help you follow up on further expansion possibilities [38]. Marketing Cloud’s pricing model is unlike Klaviyo completely hidden and it is necessary to contact them for pricing information. Fortunately, the interviews provided an estimate of how big the difference is between the digital marketing platforms. It was stated for a similar user basis: Marketing Cloud is approximately 60 percent more expensive.

4.3 Integration Complexity
During the interviews a question was asked to find out if it is troublesome to find developers that are capable of doing either of the integrations. The answer was that it is not an issue from all interview participants, with the same reasoning, that any decent back-end developer can do the task. However, depending on the software the time consumption differs, depending on what is required to complete the task.

When preparing for the integrations, the documentations were studied to help understand how to communicate with the software through the APIs. The Marketing Cloud documentation was much more evasive, and the segments were not as streamlined as in the Klaviyo documentation. Klaviyo’s documentation, in addition, contained more informative videos and code snippets, which helped with completing the integration. Both Marketing Cloud and Klaviyo had good GUIs, where Klaviyo’s was a bit more user-friendly and responding. This was realized when investigating both software GUIs and comparing the number of clicks to get around the site and how the interface gave feedback from various interactions. Both platforms had great error handling, where the feedback was clear to the developer.

Regarding the code required for the integrations, there existed differences. For Marketing Cloud 69 files were needed to be created for the integration. On top of this, 27 files had to be adjusted, for the functionalities to work. In the end zero lines of code had been written by the developer performing the integration (excluding the API call tests). For Klaviyo no files were created. In the end one file had been changed to provide the desired integration functionality. When counting the lines of code after the integration was finished, the number was twelve. Components were not counted because of the difference in architecture between the platforms, a direct outcome of the fact that the integration developer did not impact the code structure.

The configurations required for Klaviyo was not vast, and it was counted to 18 different configurations. Meanwhile Marketing Cloud had 30 configurations, which is
12 more configurations than Klaviyo had. In percentage this is approximately 67% more work regarding configurations.

4.4 Software Functionality

From literature research and completing the integration it was made clear that tracking was possible through both Marketing Cloud and Klaviyo, while Marketing Cloud had a few more tracking functionalities, such as tracking an unregistered user. In addition, the tracking was enabled on more than the website for Marketing Cloud, where you could also track via ads, social media and mobile functionalities, such as SMS or MMS.

By, during the integration, looking at the amount of functionality within the email automation tool, this feature seems to be the main focus for both digital marketing platforms. In the integration, adding a user to an email list and sending triggered emails was tested. This was done using flows within their journey builders. While it was not tested, it is stated from both platform’s websites that personalized content is possible through usage of information collected via tracking and collected data. The email interactions give immediate feedback, and it is possible to view ROI (Return on Investment) from the emails, for both platforms. The emails are built similarly with drag and drop functionality. The emails are customizable and adjusted for all device sizes. The people that were interviewed all mentioned email as the most important functionality which is backed up by Damian Ryan, founder and chairman of The Global Academy of Digital Marketing [35].

After having researched the GUI, looked at Klaviyo’s website and completed the integration, it was found that social media functionality barely existed for Klaviyo. The software had tools to link social media within emails. Except for this the only other social media feature Klaviyo offer is Facebook advertising. This functionality allows a connection to Facebook accounts, and target audience campaigns. Marketing Cloud had more tools that made use of social media. Marketing Cloud has a component in the GUI, called “Social Studio”. It includes the possibility to track users through various channels and analyze their behavior. The gathered data enables audience segmentation and personalized communication through the most popular social medias.

Analytics are obtained from above mentioned functionalities. Since Marketing Cloud had further connectivity with social media and had a bit more tracking ability, the analytics were more advanced. More information was collected through Marketing Cloud, which allows an elaborate way of segmenting audiences. Klaviyo focus on analytics directly connected to a specific email, while Marketing Cloud does the same but includes information about the user, such as location and device used. This was all discovered from continuous interactions with the GUIs.

SEO was not handled by either of the platforms, even though it is stated as best practice when it comes to digital marketing.
As stated in the previously reviewed literature, in 2016, only two percent of marketing software users applied all the provided functionality within the software. All three of the interviewees mentioned this as a concern, where the problem had occurred for several of their clients. According to them, the companies using marketing software need to have experienced people within digital marketing employed. Especially when a lot of functionality is provided.
5 Analysis

5.1 Time Consumption
During the integration, timestamps were precisely documented to provide a fair comparison regarding time consumption. The results from this was itself a good measurement of required time allocation, but in addition, questions were formulated to get answers from the interviews to use as comparison. The difference between estimated time and actual time was large.

According to the interviewed people at Improove, the Klaviyo integration is faster than the Marketing Cloud integration. They have had previous experience with Klaviyo and was therefore confident in their answer regarding how much time that integration would consume. But since the integrations done for this thesis was not created to satisfy a complete solution, the exact time is not accurate nor important. What can be measured is the difference in percentage between the interviewees answers, compared to the integrations done for the research. Here an immense aberration was found, where the interviews provided an answer of 25 percent difference in time between the integrations, while the completed integrations gave a sum of 134 percent difference in time allocation.

5.2 Cost
As can be seen in the empirical results, Marketing Cloud is overall more expensive. The initial cost for both the company providing the integration and the company using the marketing platform is not immensely dissimilar. However, what really makes the difference is the yearly charge. With a similar user base, it was concluded that the difference is 60 percent for the monthly cost, which can be a deal breaker for many companies, depending on their budget.

Although it is a lot of money at stake, digital marketing is as mentioned several times mandatory for companies looking to expand their product or service reach. The investment could be worth the outcome, which is something that companies have begun to understand. This is made clear from Omnicore’s data, where it is stated that a 50 percent money increase has happened between 2016 and 2017 to the most popular digital marketing functionalities [10]. Knowing that digital marketing is a powerful and acknowledged tool, Marketing Cloud gains some points, since it does expand the possible functionality.

5.3 Integration Complexity
Even though the interviews stated that it is effortless to find people who can do the integrations, it has been shown that integrations can vary in complications. The time consumption appeared to differ a lot between the integrations, which should be a consequence of complexity of the platforms, since the same functionality was implemented. The complexity is not as clearly viewed as time consumption and cost, although, it can be measured with the correct tools. An integration analysis, described in chapter 3.4, is used below to get an elaborate answer to the complexity of the
integrations. The analysis is performed by the researcher, based on the experiences gathered from the integrations.

Only the row for “Security/Access” is ignored, since that aspect was not implemented or tested. Both Klaviyo and Marketing Cloud will be graded with the middle score, 3, for that row.

<table>
<thead>
<tr>
<th>Tailoring Activities &amp; Aids</th>
<th>Individual Activity &amp; Tool Aid Complexity Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VL</td>
</tr>
<tr>
<td>Parameter Spec.</td>
<td>1</td>
</tr>
<tr>
<td>Script Writing</td>
<td>1</td>
</tr>
<tr>
<td>I/O Report Layout</td>
<td>1</td>
</tr>
<tr>
<td>GUI Screen Spec.</td>
<td>1</td>
</tr>
<tr>
<td>Security /Access Protocol Initialization &amp; Set-up</td>
<td>1</td>
</tr>
<tr>
<td>Availability of COTS Tailoring Tools</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Points:</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.1 Integration complexity analysis performed by researcher for Marketing Cloud

As can be seen in the time logs, the Marketing Cloud documentation was studied for several hours before starting the implementation. The reason for this was that it was unclear what to follow and where to get the information. Since a GitHub project [22], with its own documentation was used, the complexity accumulated. The complexity
mainly increased because the project is an unofficial integration solution and still a work in progress, which led to a lot of configurations having to be tested to locate the error. This is the reason a four was given as the complexity grade for Parameter Specification.

Even though a lot of files were created and altered, the amount of self-written code was next to nothing, if the API test calls are included. Due to this Script Writing got a low complexity score. Marketing Cloud had good feedback in the GUI and the cartridge provided by the GitHub project [22] had built in error handling, which simplified the process. This led to a low complexity grade for I/O Report Layout. Although the GUI gave adequate feedback, the GUI itself with all its functionalities was a bit messy. The experience was neither good or bad, which is why GUI Screen Specification got the middle grade.

As mentioned before Security/Access was not tested and it got a grade of three automatically. Availability was however extremely relevant to grade within this integration and Marketing Cloud got the highest complexity grade. A lot of credentials are needed, and you need an expensive and somewhat restricted license to use Marketing Cloud. The specific credentials had to be gathered from different places in the GUI and some even outside the main GUI.

By knowing the total point of the complexity analysis and having table 3.2, it is determined that the complexity grade for Marketing Cloud is “high”.

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<tr>
<td>I/O Report Layout</td>
<td>1</td>
</tr>
<tr>
<td>GUI Screen Spec.</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 5.2 Integration complexity analysis performed by researcher for Klaviyo

The Klaviyo documentation was studied a bit before beginning the integration, but more to prepare a streamlined process. The documentation and guides were interactive, with videos and code snippets available. This gave Parameter Specification the lowest complexity grade. Script Writing achieved the same grade due to the reason mentioned above, that code snippets were provided for the base integration.

Because close to no errors were encountered the I/O Report Layout was given complexity grade 1. However, it was also because of what was mentioned above, regarding the interactive GUI. The feedback was excellent and the guides in the GUI provided a streamlined explanation of what had to be done. This is also why GUI Screen Specification got the lowest complexity rating.

Security/Access was not considered and got the middle rating. The last aspect which was Availability was, compared to Marketing Cloud, low in regard to complexity. Only an account and API key were demanded, which made the credentials aspect minimal. It is, in addition, not restricted and anyone can use it, even for free, up to a certain number of users. The availability aspect got the grade 1 and the total rating was in the end 8 points, which concluded that Klaviyo had a low integration complexity.

Since, in the end of the integration process, all code and file structure had been provided, it is irrelevant to analyze code related measurements. The only conclusions that can be drawn from that data is the difference between how complex the platforms are. It gives an idea about how difficult it would be to find a problem within the enterprise software compared to a minor one, where there is a lot more code that can produce the error. The diversity within the integration time stamps is somewhat explained from this information, since it is easier to add a couple lines of code for the
Klaviyo integration compared to searching and carefully adjusting files for the Marketing Cloud integration.

What is however relevant is the configuration complexities, which contributed to most of the error tracking and required practical implementations. Here, a contrast was clear and explains why Marketing Cloud was much slower to integrate. The configurations were often nested for Marketing Cloud, were if the wrong permissions or credentials were previously configured, this could compromise the entire integration. This led to a significant amount of time being spent on trying different configurations to make the code function properly.

5.4 Software functionality
According to both Damian Ryan [35], the founder of The Global Academy of Digital Marketing, and the answers from interviews, email prevailed as the most valuable functionality within digital marketing. Marketing Cloud and Klaviyo both had good and similar features for email. The points in the bullet list in chapter 3.2 that were tested in the integration and GUI exploration, were covered by both platforms. Marketing Cloud and Klaviyo have managed to automate every step with simplified customization.

From the interview answers it was a mutual conclusion that personalization is of high importance, and two of the points in the bullet list stated the importance of segmented campaigns and personalized content. Both Marketing Cloud and Klaviyo achieve this feature.

Another important functionality that was been rapidly growing the last couple years, according to Teresa Piñeiro-Otera and Xabier Martínez-Rolán [36], is social media. However, social media was only mentioned by one interviewee, who stated that it was of less importance. It is clear that Klaviyo has not managed to focus social media, which was proven while investigating functionalities provided by Klaviyo. The only channel extension Klaviyo is able to complete is Facebook, which is not optimal since channel extension is valued highly [35]. This is something that Marketing Cloud, as an enterprise software, has decided to handle. Marketing Cloud makes it possible to successfully loop the social cycle mentioned in a study by Digital Marketer [37]. Marketing Cloud tracks and analyzes the user across different social media platforms to later segment audience and provide personalized content.

Tracking itself is perhaps not a digital marketing functionality, but it is a tool that enables the most vital parts of digital marketing. For instance, personalized content, segmented audiences and the ability to gather a large amount of data to analyze. All are parts that were brought up by the interviewees, while asking what the most important parts of digital marketing are. Marketing Cloud and Klaviyo are both highly capable of tracking, while Marketing Cloud exceeds with a small marginal. One major difference is that Klaviyo does not allow offline tracking unless other criteria is satisfied, which Marketing Cloud is able to do. Marketing Cloud also enables more data to be collected, which is always positive for a richer segmentation.
Due to the amount of tracking available, analytics are enabled. Analytics which also enables features and that has been stressed as important throughout the research. The interviewed people all spoke highly of analytics or parts of it, such as personalized content, audience awareness, targeted marketing, etc. Reviewed literature supports the interview answers, while also acknowledging analytics as vital. For example, the model described in chapter 3.3 has analytics in the center of the digital marketing domain.

As mentioned previously, tracking is enhanced for Marketing Cloud and more data can be collected from more sources. This makes Marketing Cloud more advanced than Klaviyo, which leads to further personalization and segmentation. The extended data, in addition, allows the analytics to perform better in understanding the customer and what digital marketing gets results. This is stated as best practice for analytics usage in chapter 3.5.4.
6 Discussion and conclusions

6.1 Results

Most of the results discovered from the performed methods were unanimous. The findings from the experiment could be backed with both literature and interview answers. However, even though the data was unanimous, the precise number was not always the same. Especially not when it came to the time consumption of the integrations, where big differences were found. The difference was that the interviewed people estimated that the Marketing Cloud integration would take 25\% more time than the Klaviyo integration, while the calculated percentage was 134\%.

This can depend on various factors. The most plausible explanation is that, since Klaviyo has been integrated a lot of times before by Improove, that estimation was trustworthy. Since Marketing Cloud is new to Improove, that estimation might have a larger uncertainty. Evidence of this can be found in the interview answers in table 4.2, where both interviewees stated that the integration might require more allocation of time, which has been marked with a plus sign after number of estimated hours.

Another reason for the contrast might be that, since only a base integration was conducted, the time difference would perhaps decrease with continued implementations. This is especially possible since the GitHub project [22] contained more code than was used. The code consists of functionality for further implementations and should be taken into account when the conclusions are being drawn.

Something that was not expected and that compromised the research to a lesser degree was the fact that no code was written in the end, except for some tests. This made some of the measurements regarding integration complexity, near to irrelevant. It was unforeseen; however, it enabled a greater analysis of the configurations needed and gave the gathered theories more meaning within the research.

In the end, the results are only gathered from two specific platforms, which is not optimal, but was necessary because of the time constraint. As mentioned, these are good examples of digital marketing platforms in their size scale, where the conclusions can assist in solving the general issue. Because of this, the entire research is applicable for several companies facing the same issue. The preferred requirements to apply the results and conclusions are, as stated, that the company has similar prioritized factors.

6.2 Restrictions

Because of the time limitations, only a base integration was performed. It is possible that this affected the experiment results, which lead to less accurate conclusions in the end. It can both have affected the time allocation aspect and the integration complexities, with everything surrounding that area.

Another restriction that might have affected the final result is the usage of a GitHub project [22]. This was used to make the process more similar to other enterprise
platforms, that have a more stable integration base, and to make the integration fit the research time scope. This complicated the analysis of the empiric data, since not all work was done by the researcher. The complexity became a bit more troublesome to calculate, which would have been avoided if another enterprise marketing software had been available and chosen.

6.3 Conclusions and recommendations
The conclusion is that a minor marketing software is almost always preferred. The cost is guaranteed to be higher when choosing an enterprise software. Although, even if the cost is not a large issue, other aspects should be considered. Time consumption was found to differ a lot between a minor marketing software, compared to an enterprise marketing software. Same with the integration complexity, where the enterprise software had a much higher complexity, with more critical parameters. Finally, the extended functionality is what an enterprise digital software exceeds at, however, it is useless without people implementing it.

Because of these reasons, a minor marketing software is almost always preferred. Unless the company using the digital marketing software is determined to fully implement all of the provided functionality. Preferably the company should hire or already have employees that can make use of the software functionalities. Another important factor is the difference in time consumption, where the company cannot be close to the deadline, since an enterprise software is time consuming. In addition, the budget is a deal breaker, which determines whether the integration is possible. Finally, the company chosen to integrate the software should have previous experience with it, to prevent unknown integration complexity, which reduces time consumption, which reduces cost.

6.4 Further research
The performed research allows several opportunities for expansion, with either more data or another perspective on the research area. Only a base integration was conducted, which provides legitimate conclusions, but would be empowered by a full integration. Continued studies could, in addition, include comparisons between different and more digital marketing platforms. This would provide an elaborate generalization of software types, which could further determine what the contrast between an enterprise marketing software and a minor one is.
References


52


Appendices

Appendix 1

Interview template

1. How much money is Improove investing in Marketing Cloud, respective Klaviyo? In general/for each project)
2. How high is the demand for marketing software in general?
3. How high is the demand for Marketing Cloud, respective Klaviyo?
4. What would you say are the most important factors when deciding which marketing software to choose? How would you rank the factors you just mentioned?
5. What functionality is according to you/the client most important that a marketing software provides?
6. How much time would you allow to allocate for the integration? Please answer for each software.
7. How difficult is it to find people who can do these integrations?
8. What big differences do you see between the softwares?

Appendix 2

<table>
<thead>
<tr>
<th>Start Time</th>
<th>End Time</th>
<th>Total Time</th>
<th>What Was Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-10-07</td>
<td>8:46 AM</td>
<td>1:11 PM</td>
<td>[MC] Read Marketing Cloud documentation and wiki for used GitHub project.</td>
</tr>
<tr>
<td>2018-10-07</td>
<td>1:50 PM</td>
<td>3:13 PM</td>
<td>[MC] Continued reading GitHub wiki and slowly started to follow the guided steps.</td>
</tr>
<tr>
<td>2018-10-13</td>
<td>10:30</td>
<td>14:30</td>
<td>[MC] Continued to follow the installation/integration steps provided but the unofficial GitHub project. Especially created necessary accounts and got credentials for APIs, FTP services and so on.</td>
</tr>
<tr>
<td>2018-10-13</td>
<td>15:23</td>
<td>21:22</td>
<td>[MC] Finished the GitHub guide and moved on to checking if everything looked good in the Salesforce</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Time</td>
<td>Duration</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
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<td>----------</td>
</tr>
<tr>
<td>2018-10-14</td>
<td>9:23</td>
<td>12:00</td>
<td>2h, 37min</td>
</tr>
<tr>
<td>2018-10-14</td>
<td>12:29</td>
<td>20:00</td>
<td>7h, 31min</td>
</tr>
<tr>
<td>2018-10-20</td>
<td>8:10</td>
<td>12:10</td>
<td>4h</td>
</tr>
<tr>
<td>2018-10-20</td>
<td>13:01</td>
<td>20:05</td>
<td>7h, 4min</td>
</tr>
<tr>
<td>2018-10-21</td>
<td>8:50</td>
<td>13:00</td>
<td>4h, 10min</td>
</tr>
<tr>
<td>2018-10-21</td>
<td>14:00</td>
<td>23:39</td>
<td>9h, 39min</td>
</tr>
<tr>
<td>2018-10-23</td>
<td>18:03</td>
<td>21:58</td>
<td>3h, 55min</td>
</tr>
<tr>
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<td>08:30</td>
<td>13:10</td>
<td>4h, 40min</td>
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<tr>
<td>2018-10-27</td>
<td>13:55</td>
<td>21:11</td>
<td>7h, 16min</td>
</tr>
<tr>
<td>Date</td>
<td>Start Time</td>
<td>End Time</td>
<td>Duration</td>
</tr>
<tr>
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<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>2018-10-28</td>
<td>9:45</td>
<td>11:45</td>
<td>2h</td>
</tr>
<tr>
<td>2018-10-28</td>
<td>15:23</td>
<td>19:30</td>
<td>4h, 7min</td>
</tr>
<tr>
<td>2018-11-03</td>
<td>8:00</td>
<td>13:23</td>
<td>5h, 23min</td>
</tr>
</tbody>
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