

Search Engine Optimization for an International Business to Business Company in the Beauty Industry

Measuring the Results with Web Analytics

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<p>The significance of the e-commerce is emphasized in an increasingly tightening competitive environment where purchases are more often performed online. E-commerce offers possibilities for the marketer in a global context, but it also sets new kinds of requirements to stand out from the competitors. The higher the search results are on Search Engine Result Page (SERP), the better opportunities for the marketer that the visitor enters the web site. Position on the SERP can be increased by executing Search Engine Optimization (SEO) to the web site. On-Page SEO targets generating more organic traffic to the web site by various actions, such as keyword research and content optimization.</p> <p>The case company of the study was Hairmail Oy, a wholesale company, operating in the B-to-B segment in the field of beauty. The research context encompassed Swedish beauty professionals. The purpose of the study was to find out how to successfully implement SEO in order to improve the Key Performance Indicators (KPIs) of the case company. On-Page SEO factors were selected from the scholarly literature and they were implemented to the case company's web site. Additionally, the aim was to scrutinize how to utilize Web analytics framework to measure the results of SEO.</p> <p>Lean Six Sigma-DMAIC was used as a framework for the improvement process. Whereas REAN framework and part of the RACE model were used for measuring the KPIs. Preliminary data from the secondary sources was used to measure the results by Web analytics (Google Analytics and SCM analytics tool). The results showed that some of the KPIs were improved and some had a negative trend. Since the study was a development project, more SEO actions are required on the web site. Additionally, search engines need a longer period of time to evaluate the pages until the final results are achieved. However, the objectives of the study were met in order to enable continuous web site development.</p>		
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<p>Sähköisen kaupankäynnin merkitys korostuu kiristyvässä kilpailuympäristössä, jossa ostetaan yhä useammin verkosta. Verkkokauppa antaa markkinoijalle globaaleja mahdollisuuksia, mutta se asettaa myös uudenlaisia vaatimuksia, jotta voidaan erottua kilpailijoista. Mitä paremmin hakutulos sijoittuu hakutulossivulla, sitä paremmat mahdollisuudet markkinoijalla on saada kävijä verkkosivustolle. Hakutuloksen sijoitusta voidaan parantaa tekemällä hakukoneoptimointia. Sivuston hakukoneoptimoinnin tavoitteena on lisätä orgaanista liikennettä verkkosivustolle, ja sitä voidaan toteuttaa erilaisilla toimilla, kuten avainsanatutkimuksella ja sisällön optimoinnilla.</p> <p>Tutkimuksen kohteena oli tukkukauppa Hairmail Oy, joka toimii B-to-B segmentissä kauneuden alalla. Kohderyhmänä olivat ruotsalaiset kauneusalan ammattilaiset. Tutkimuksen tarkoituksena oli selvittää, miten hakukoneoptimointia voidaan toteuttaa kohdeyrityksen keskeisten suorituskykyindikaattoreiden parantamiseksi. Sivuston sisäisen optimoinnin tekijät valittiin tieteellisestä kirjallisuudesta ja ne toteutettiin kohdeyrityksen verkkosivustolle. Lisäksi tavoitteena oli tutkia, miten Web-analytiikkaviitekehystä voidaan käyttää hakutulosten mittaamiseen.</p> <p>Lean Six Sigma-DMAICia käytettiin kehitystyön viitekehystenä. REAN-viitekehystä ja osaa RACE-mallista käytettiin suorituskykymittareiden määrittämiseen. Data kerättiin toissijaisista lähteistä ja mittaus suoritettiin web-analytiikan avulla (Google Analytics ja SCM analyysityökalu). Tulokset osoittivat, että osa suorituskykyindikaattoreista oli parantunut ja joillakin oli negatiivinen trendi. Koska tutkimus oli kehitystyö, sivustolla on tehtävä lisää optimointia. Lisäksi hakukoneet tarvitsevat pidemmän ajan sivujen arvioimiseksi, kunnes lopulliset tulokset saavutetaan. Tutkimuksen tavoitteet kuitenkin saavutettiin sivustokehityksen mahdollistamiseksi.</p>		
Avainsanat (asiasanat) hakukoneoptimointi, sivujen sisäinen hakukoneoptimointi, suorituskyvyn mittarit, web-analytiikka, Google Analytics		
Muut tiedot (salassa pidettävät liitteet) Liite 1 on salassa pidettäviä, ja ne on poistettu julkisesta työstä. Salassapidon peruste on Julkisuuslain 621/1999 24§, kohta 17, yrityksen liike- tai ammattisalaisuus. Salassapitoaika on kymmenen (10) vuotta, salassapito päättyy 1.12.2030.		

Contents

1	Introduction	5
	1.1 Motivation for the Research.....	6
	1.2 Research Problem and Research Question.....	7
	1.3 Structure of the Thesis.....	8
	1.4 Case Company.....	9
	1.5 Market Overview	10
	1.6 Glossary of Key Concepts.....	11
2	Literature Review	13
	2.1 Why Search Engine Optimization (SEO) matters?	13
	2.1.1 What is a Search Engine and how does it Work?.....	14
	2.1.2 Website Findability and Google's Ranking Factors	17
	2.1.3 SEO Methods	19
	2.1.4 On-Page SEO	21
	2.1.5 Keyword Research	24
	2.1.6 International SEO.....	25
	2.1.7 Advantages and Disadvantages of SEO	26
	2.2 Key Performance Indicators (KPIs).....	26
	2.2.1 The KPI Pyramid.....	27
	2.2.2 Setting the Goals and Objectives	29
	2.2.3 On-Page SEO KPIs	31
	2.3 Is Web Analytics rather Business analytics?	33
	2.3.1 The Purpose of Web Analytics	34
	2.3.2 Web Analytics Optimization Process.....	36
	2.3.3 Optimization Process Framework	39
	2.3.4 Barriers and Limitations of Web Analytics	44

2.4 A Framework for the Study.....	46
3 Methodology.....	47
3.1 Research Process	48
3.2 Formulating the Research Question	49
3.3 Research Methodology and Research Approach	51
3.4 Setting the KPIs for the Case Company	53
3.5 Data Collection and Analysis.....	56
3.6 Validity and Reliability	57
3.7 Conducting the Development Project	58
4 Results.....	60
5 Discussion.....	63
5.1 Assessment of the Results in the Light of Literature.....	63
5.2 Answers to the Research Question.....	67
5.3 Managerial Implications	70
5.4 Limitations of the Study.....	71
5.5 Recommendations for Future Studies.....	72
6 Conclusion.....	73
References	76
Appendices	81

Appendix 1. Data from Google Analytics and SMC analytics tool (confidential)

Figures

Figure 1. SEO as part of the Digital Marketing environment (Created by the Author. Source: Rebel, 2019).	5
Figure 2. Outline and Structure of the Thesis (Created by the Author).....	8
Figure 3. Hairmail Oy's Home Page Sweden (www.hairmail.net, 2020).....	9
Figure 4. E-commerce turnover in Sweden from 2004 to 2020 (Statista, 2020).	10
Figure 5. Linking Between Searcher, Search Engine and Web Site (Ghulam et al., 2017).....	15
Figure 6. Market Share Held by the Leading Search Engines in Sweden as of January 2020 (Statista, 2020).	15
Figure 7. Stages Involved in Producing a Search Engine Listing for the Natural Listings (Created by the Author. Source: Chaffey et al. 2016, 487).	16
Figure 8. Google Organic Click-Through Breakdown by Position (Dean, 2020).....	17
Figure 9. Components of Google's Ranking Algorithm (Created by the Author. Source: Nada, 2020).	19
Figure 10. Mozlow's Hierarchy of SEO Needs (Created by the Author. Source: Moz, 2020).....	20
Figure 11. The Main Parts of SEO (Maplesage, 2020).	21
Figure 12. On-Page SEO Factors (Shenoy & Prubhu 2016).	22
Figure 13. The KPI Pyramid (Created by the Author. Source: Chaffey & Smith 2017, 575).....	28
Figure 14. The KPI Pyramid Becomes a Sales Funnel (Created by the Author. Source: Chaffey & Smith 2017, 576).	29
Figure 15. The Relationship Between Vision, Goals, Objectives and KPIs (Chaffey et al. 2016, 198).....	30
Figure 16. Usage and Performance of Web Analytics by Digital Marketers (Chaffey & Patron 2012, 31. Source: Econsultancy-RedEye).	35
Figure 17. The Web Analytics Roadmap (Hamel 2009, 7).....	36
Figure 18. The Performance Measurement Process (Created by the Author. Source: Chaffey et al. 2016, 555).	37
Figure 19. Key Factors Required for Analytics-Driven Performance Improvements (Source: Smartinsights.com. Chaffey & Patron 2012, 37.).....	38

Figure 20. DMAIC Approach in Lean Six Sigma Methodology (Kumar, 2018).....	39
Figure 21. Improvement Process for Conversion Rate Optimization (Source: Econsultancy-Econsultancy-RedEye. Chaffey & Patron 2012, 37).....	40
Figure 22. RACE Framework Including KPIs (Chaffey et al. 2016, 32).	42
Figure 23. The REAN Model (Coursaris et al. 2013, 2).	44
Figure 24. Framework of this Study (Created by the Author).....	47
Figure 25. Theory - Research - Development - Practice Cycle (Swanson & Holton III 2005, 8.).....	49
Figure 26. Research Process in Organizations (Swanson & Holton III 2005, 13.)	50
Figure 27. Spiral of Action Research Cycles (Coghlan & Brannick 2014, 11).	52
Figure 28. Performance Targets and Measures of the Case Company (Created by the Author. Source: Chaffey et al. 2016, 198).	55

Tables

Table 1. Summary of KPIs and On-Page SEO Actions Regarding Case Company (Created by the Author).	56
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1 Introduction

The importance of e-commerce has significantly grown in the past years. The growth of the Internet over the past decade has been one of the most common reasons to explain the globalization. E-commerce is depicted as one of the main crucial instruments to foster business growth in the future. Essentially, e-commerce has given companies possibilities to adapt new business strategies in a global context. However, it has changed totally how companies design and manage their digital operations, as well as analyzing methods towards new e-commerce standards. (Saura et al. 2017, 1.)

In the Figure 1. has been represented the online marketing ecosystem. Search Engine Optimization (SEO) is an integral part of online marketing activities since companies are competing for the same customers and typically, the company that gets the most visibility in the Search Engine Results Page (SERP), gets the visitor to click on their web site. (Dakshita et al. 2020, 375.)



Figure 1. SEO as part of the Digital Marketing environment (Created by the Author. Source: Rebel, 2019).

This study aims to find out how the case company can drive more organic traffic to the web site by improving SEO. Additionally, the study encompasses what kind of aspects need to be highlighted when improving the web site's SEO. This study is focused on On-Page SEO development.

Key Performance Indicators (KPIs) are critical key indicators which are measured to assess how effectively key business objectives are achieved. This study also defines On-Page SEO KPIs for the case company. The development of SEO actions is measured by using Web analytics tools. It is noteworthy that this study is a development project which aims to continue after the Thesis.

The topic to be studied is very current due to the worldwide Covid-19 pandemic in the current year 2020, the effects on trade and marketing were significant. As the restrictions applied on people moving freely, they started to shift from the brick-and-mortar stores towards e-commerce channels. This means that the competition in the field of e-commerce will be intensifying further. Thus, the importance of measuring and analyzing the web site's performance will be highly emphasized in the future.

Regarding this Chapter, motivation for this study is introduced from the perspective of businesses in general, the case company and from a personal point of view. Additionally, the research problem and research question are presented, as well as the objectives of this study. The overall structure of the study is also represented. The case company and the target market are introduced and lastly, a glossary of key concepts used in this study are listed.

1.1 Motivation for the Research

SEO improvement was chosen as a key topic of this development study because there was a need in the case company to study how to gain more organic traffic to the company's Swedish web site. Since the company operates in the B-to-B segment, only beauty professionals can purchase from the web shop. With that in mind, it is important that the targeted customer segment finds well the company's web site. Compared to the case company's web site in Finland, the amount of Sweden's web site visitors and purchases are significantly lower despite the great potential in the

local markets. It is important to find out, how the case company can address these issues by improving SEO and thus, increase the turnover of the Swedish web shop.

Further support for the study can be found in the literature. Namely, the study carried out by Järvinen et al. (2012, 113) revealed that especially smaller companies are not widely using digital measurement solutions and also, measurable benefits gained from digital marketing are limited in the B-to-B sector. This gives the study a wider dimension than the beauty sector and the methods of the study can be applied more broadly than only in the beauty industry.

To my best knowledge, I have not found out that there has been research before regarding SEO activities in the field of B-to-B beauty sector. This study may benefit the field at large by providing feasible tools and methodology for improving the web site performance. Furthermore, the case company will benefit by having concrete actions to improve SEO, and with some exceptions to multiply these SEO activities to Finnish as well as Euro-zone web sites as well.

My personal motivation is to gain more information and knowledge regarding the latest SEO techniques to be able to develop the web sites further. I have been working in the company for the past 14 years and I am currently in charge of developing the web site. I have gained a lot of knowledge of the beauty industry and the company itself during my years in Hairmail and beyond. Thus, I have utilized my experience and insights in this study.

I am studying at the Master's Degree Programme in Entrepreneurship and Business Competence, and I wanted to elaborate how SEO development can affect the case company's business performance.

1.2 Research Problem and Research Question

Research problem: How to generate more organic traffic to web site via Search Engine Optimization (SEO) by targeting B-to-B segment (beauty professionals)?

Research question: How to implement Search Engine Optimization (SEO) to improve Key Performance Indicators (KPIs)?

Sub-question: How Web analytics frameworks are utilized to measure the results of SEO?

This study has four main *objectives*: (i) Establish a list of relevant Web site KPIs and use targeted SEO processes to improve these. (ii) Execute On-Page SEO actions on the web site. (iii) Measure what kind of an impact the SEO actions have on the Web site performance. (iv) Create a process for the case company to develop SEO and Web analytics measurements further.

1.3 Structure of the Thesis

The structure of this study is represented in Figure 2. There are six Chapters; Introduction, Literature Review, Methodology, Results, Discussion and Conclusion. The study proceeds in accordance with JAMK's reporting guidelines. Introduction represents the overall research context and motivation behind the study. Literature review introduces the key concepts of the theory and in the end of this Chapter the framework for this study is presented. Methodology Chapter comprises the overall methodology used in this study. Results Chapter presents findings of the study and in the Discussion Chapter the results are thoroughly analyzed. Conclusions summarizes the major points of the study.

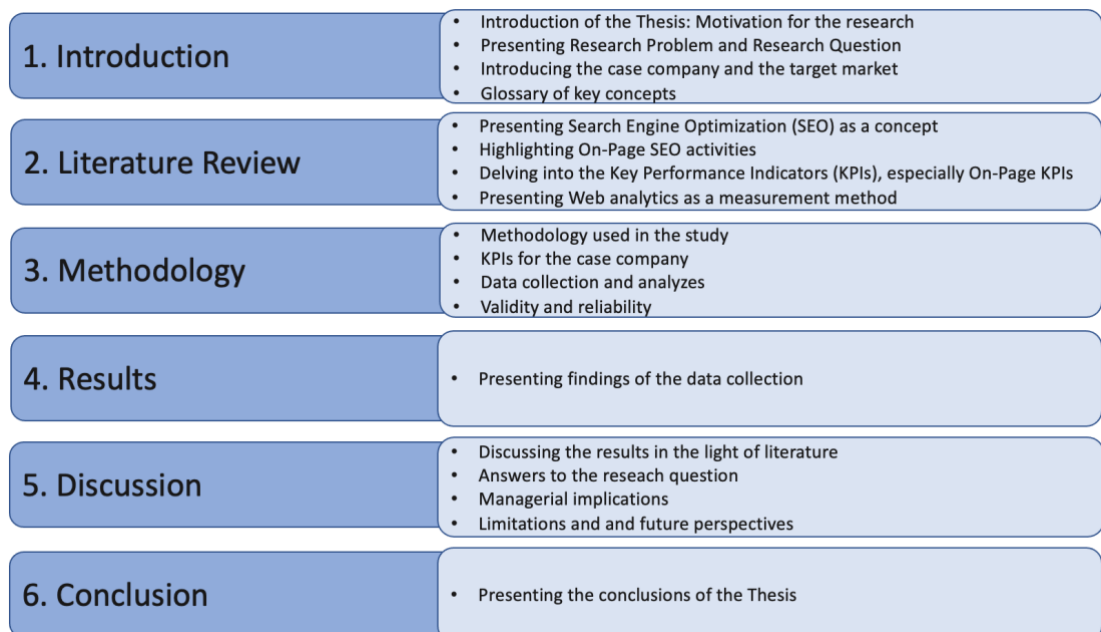


Figure 2. Outline and Structure of the Thesis (Created by the Author).

1.4 Case Company

The case company of this study is a wholesale company in the field of beauty, Hairmail Oy. The company operates in the B-to-B segment serving hairdressers, beauty professionals, students and schools in the field. Hairmail is established 1993 in Finland and started operations in Sweden 1999. The company employs 33 people. Turnover in 2019 was 8,5 million (€), including both countries (Asiakastiето, 2020.)

As marketing tools, in Sweden Hairmail applies e-mail marketing and social media platforms such Instagram and Facebook alongside printed or electronical offer leaflet. Customers are placing orders via phone or web shop.

The web shop was opened 2013 in Sweden and in Finland; below is presented the frontpage of the Swedish web shop (Figure 3.). In 2019 Hairmail launched a web shop in Euro-zone countries. A special feature of the web shop is that all the clients need to register by using their organization number for the first time they login in order to be able to see the prices and make an order. The registration is approved by Hairmail representative. In other words, consumers are not able to order from Hairmail's web shop. The target company's web site is integrated to the web shop. Thus, this study uses the term 'web site' which refers to a web shop.

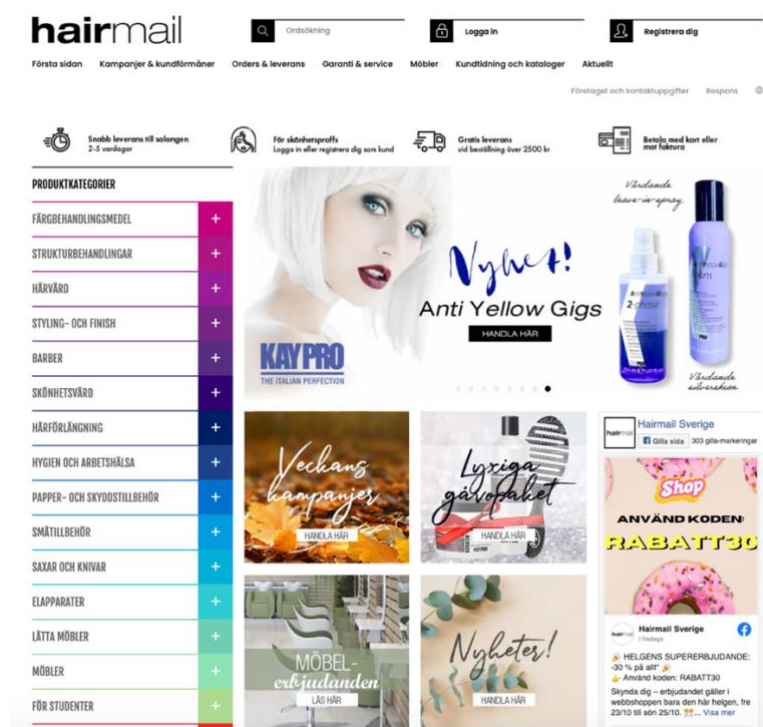


Figure 3. Hairmail Oy's Home Page Sweden (www.hairmail.net, 2020).

1.5 Market Overview

Professional hair business in Sweden consists of multiple clusters; hairdressers, entrepreneurs, educational institutes, wholesalers, organizations and governmental institutions. There were 22 000 active hair stylists and 8500 hair salons in Sweden in 2013. 75 percent of hairdressers work as entrepreneurs, either by owning a salon or renting a chair in a salon. Only approximately 25 percent of all professional hairdressers are employed. Hair industry's annual sales was 10 billion SEK (1 billion EUR) in 2013. Consumers are using circa 700 SEK (70 EUR) on average per hairdresser visit. (L'Oréal, 2013).

E-commerce in Sweden has increased drastically in the last years (Figure 4.). The exceptional year 2020 has increased digital trade in Sweden in an unprecedented way. It has been forecast that e-commerce turnover in Sweden in 2020 is 115,7 billion SEK (11,18 billion EUR). This trend creates remarkable opportunities for companies to grow their e-commerce. At the same time, however, it brings demands and the need for development so that the web sites can keep up with the intensifying competition.

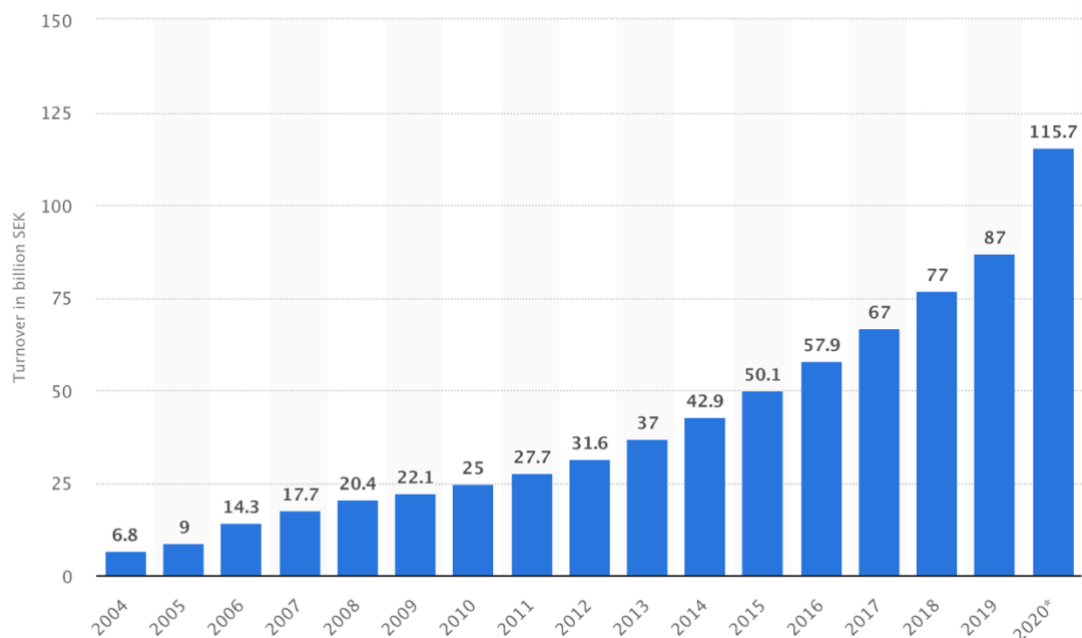


Figure 4. E-commerce turnover in Sweden from 2004 to 2020 (Statista, 2020).

1.6 Glossary of Key Concepts

Action Research: "A family of related approaches that integrate theory and action with a goal of addressing important organizational, community and social issues together with those who experience them." (Coghlan & Brannick 2014, 20.)

Bounce Rate: "Proportion of visitors to a page or site that exit after visiting a single page only, usually expressed as a percentage." (Chaffey et al. 2016, 652.)

Click-through Rate (CTR): "Expressed as a percentage of total ad impressions and refers to the proportion of users viewing an advertisement who click on it. It is calculated as the number of click-throughs divided by the number of ad impressions." (Chaffey et al. 2016, 653.)

Google Analytics: Google Analytics is a quantitative analytics tool that can be used for measuring the volume of clicks, to assess from which source the visitors come and to have insight about visitors' behavior. (Coursaris et al. 2013, 5.)

Key Performance Indicators (KPIs): "Metrics used to assess the performance of a process and/or whether goals set are achieved." (Chaffey et al. 2016, 663.)

Keyphrase (keyword phrase): "The combination of words users of search engines type into a search box which form a search query." (Chaffey et al. 2016, 663.)

Lean Six Sigma-DMAIC framework: Methodology that aims to improve the efficiency and effectiveness of business performance and targets on process enhancement and reduces the defect of the process. Lean Six Sigma methodology is driven by a DMAIC (Define-Measure-Analyse-Improve-Control) concept that recognizes, measures, evaluates, improves and controls the process. (Kumar, 2018).

Natural or organic listings: "The pages listing results from a search engine query which are displayed in a sequence according to relevance of match between the keyword phrase typed into a search engine and a web page according to a ranking algorithm used by the search engine." (Chaffey et al. 2016, 666.)

On-Page Optimization: "Writing copy and applying markup such as the <title> tag and headings tags <h1> to highlight to search engines relevant keyphrases within a document. (Chaffey et al. 2016, 667.)

RACE framework (*Reach - Act - Convert - Engage*): "A model framework for optimizing online marketing performance". (Chaffey & Patron 2012, 41.)

REAN framework (*Reach - Engage - Activate - Nurture*): Used to measure the web site's performance, define the measurement strategy and also, to plan optimization activities. (Coursaris et al. 2013, 2-5.)

Search Engine: "Specialized website that uses automatic tools known as spiders or robots to index web pages of registered sites. Users can search the index by typing in keywords to specify their interest. Pages containing these keywords will be listed, and by clicking on a hyperlink the user will be taken to the site." (Chaffey et al. 2016, 671.)

Search Engine Optimization (SEO): "A structured approach used to increase the position of a company or its products in search engine natural or organic results listing (the main body of the search results page) for selected keywords or phrases." (Chaffey et al. 2016, 672.)

Search Engine Results Pages (SERP): "The page(s) containing the results after a user types in a keyphrase into a search engine. SERPs contain both natural or organic listings and paid or sponsored listings." (Chaffey et al. 2016, 672.)

Web Analytics: "Techniques used to assess and improve the contribution of digital marketing to a business, including reviewing traffic volume, referrals, clickstreams, online reach data, customer satisfaction surveys, leads and sales." (Chaffey et al. 2016, 677.)

2 Literature Review

Search Engine Optimization (SEO), Key Performance Indicators (KPIs) and Web analytics theories form the foundation of this study and these elements are presented in such depth that it supports answering to the research question and justifies the choices that have been made regarding this study.

In the literature review the principles of SEO are introduced, starting from the basic functions and proceeding into the details on how to execute On-Page SEO.

Additionally, the special features of KPIs are scrutinized. Especially, the focus is on how to measure On-Page SEO development and what kind of factors should be noticed when setting the objectives.

Data of this study has been collected via Web analytics. Thus, the literature review also discusses the purpose of Web analytics, optimization process and presents suitable frameworks for the optimization process.

Lastly, the framework for this study is introduced. The framework has been created based on the literature review, combining three elements; SEO, KPIs and Web analytics.

2.1 Why Search Engine Optimization (SEO) matters?

The significance of good quality web sites is growing rapidly. More the digital revolution accelerates, the competition in the field of e-commerce increasingly grows. More domestic and international competitors arrive to the market and the one, who gets the most visibility, has a good chance to win the customers over.

To this competition companies can best be prepared by optimizing the content of their web site to reflect the needs of the customers to improve user experience. Typically search engines, which index and class other web sites, appreciates good quality content that is based on the customer's needs. (Dakshita et al. 2020, 375-377.)

The target is to improve web site's presence and visibility on Search Engine's Results Page (SERP). Data shows that there can be seen positive correlation between amount of site visitors when a site is appearing higher and more frequently in search results.

This is something companies should pursue since many web sites receive the majority of their web site traffic through search engine's organic (also natural or non-paid listings) results. (Dakshita et al. 2020, 375-377.) Moz (2020) has described that Search Engine Optimization (SEO) "is the practice of increasing the quantity and quality of traffic to your website through organic search engine results".

Egri and Bayrak (2014) notes that 93 % of internet traffic is managed by search engines. Therefore, search engines are significant in terms of a web site findability and competing against rivalries. With the help of SEO is possible to affect search engine ranking and thus, competitiveness. It should also be noted that, SEO is a cost-effective way to drive quality traffic into the web site, thus it gives also possibilities for SME companies with smaller marketing budgets to compete against bigger corporations. (Dakshita et al. 2020, 377.)

There are several ways how to implement SEO, for example using relevant keywords, and designing good quality content that is interesting to targeted customers. Search engines are processing information and getting smarter every day. It is essential to follow appropriate and legitimate tactics to implement SEO. (Shenoy & Prubhu 2016.)

In the following subchapters the principles of search engine functioning and SEO are more thoroughly explained.

2.1.1 What is a Search Engine and how does it Work?

Search engine is a layer between the searcher and a web site (Figure 5.). To get the desired results from the Internet user (searcher) types the selected keywords. There are search engines such as Google, Yahoo! and Bing and additionally, local search engines in China, Russia and South Korea markets. Search engines are so significant, that search trends can be used for predicting sales volumes. (Chaffey et al. 2016.) It is said that 3,5 billion Google searches are executed on a daily basis. (Manley, 2019)

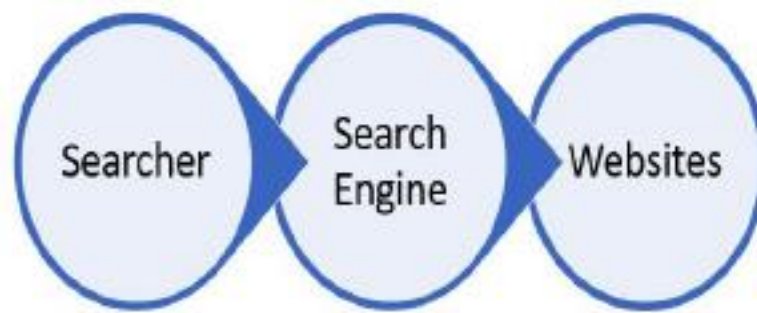


Figure 5. Linking Between Searcher, Search Engine and Web Site (Ghulam et al., 2017).

Since Sweden is the target country of this study, data of the most used search engines in Sweden has been presented in Figure 6. Google was dominant and the leading desktop search engine in Sweden as of January 2020. Google's market share was nearly 96 percent, against Bing (2,49 percent) and Yahoo! (0,94 percent). Regarding mobile search engines, Google achieved almost 99 percent market share in Sweden. Statistics are parallel compared to a global scale - Google has 86 percent market share and Bing 6,25 percent (Statista, 2020). Therefore, it is justified to follow Google's guidelines to improve web site visibility (Harto, 2019).

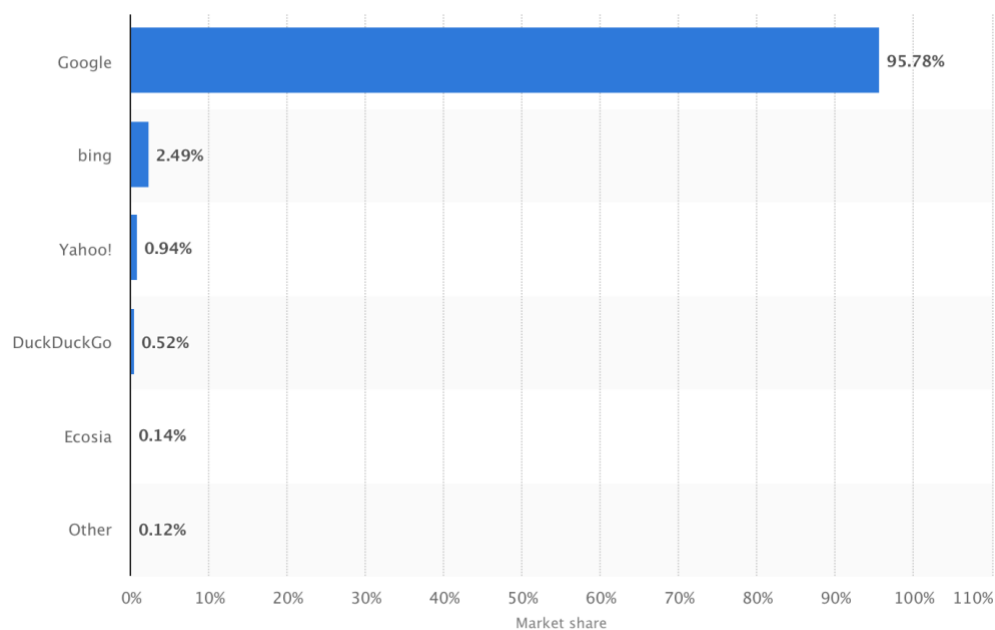


Figure 6. Market Share Held by the Leading Search Engines in Sweden as of January 2020 (Statista, 2020).

In order to be able to optimize web site findability it is relevant to understand how search engines work. The process of creating natural listings by the search engine is as follows (Figure 7.):

- I. *Crawling.* Search engine sends out *robots (also bots, spiders)* to crawl around sites. The purpose of crawling is to identify new or changed pages for indexing. URL of the page is saved for later analysis and indexing.
- II. *Indexing.* Search engine creates a massive index (database) of all the particular words and their location on the sites. In order to be able to find the most relevant pages search engine inverts the index to produce a lookup table of documents containing particular words. At this point, documents are not sorted in terms of relevance.
- III. *Ranking or scoring.* First, search engine ranks documents in the lookup table to assess the most relevant set of documents. Second, ranking in the Search Engine Results Page (SERP) is executed based on many ranking factors (Phase 1 in Figure 5.).
- IV. *Query request and results serving.* User's location is assessed through IP address and query is passed to a relevant data centre for processing. Ranking returns a sorted list of relevant documents which are presented in the SERP in real time when search query enters by the user.

(Chaffey et al. 2016, 485-486.)

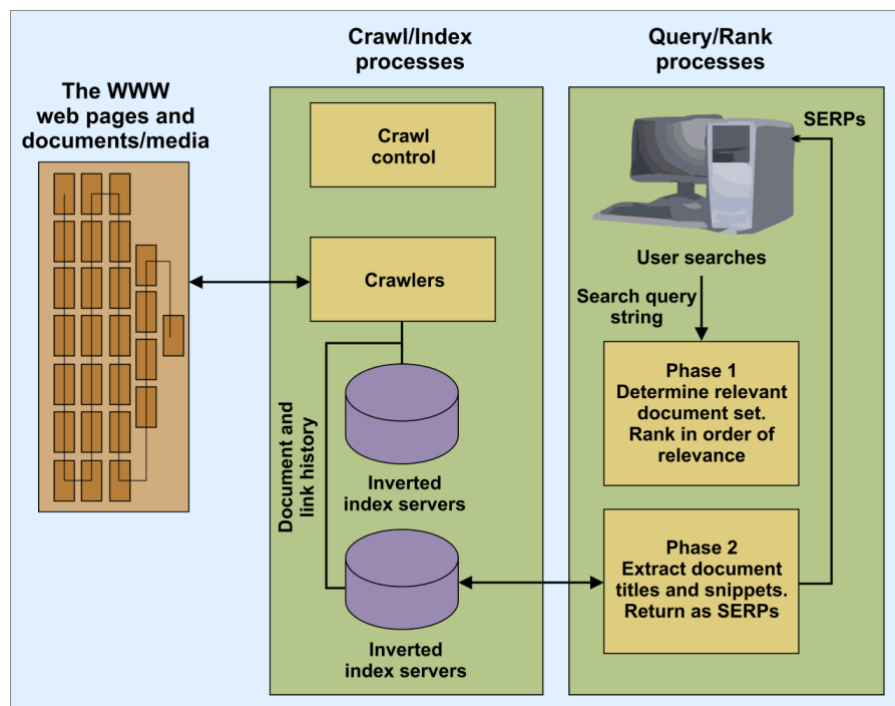


Figure 7. Stages Involved in Producing a Search Engine Listing for the Natural Listings (Created by the Author. Source: Chaffey et al. 2016, 487).

2.1.2 Website Findability and Google's Ranking Factors

It is essential that web site is among the first positions on the first page of SERP to increase the visibility (Saura et al. 2017, 6). This statement is further justified in a web article on Google's organic Click-Through Rate (CTR) breakdown comparison (Figure 8). Being the first in search results, the link will have 31,73 percent of all clicks. The second position on SERP, gets 24,71 percent of clicks. 10th placement gives only 3,09 percent of clicks, thus 10 times lower than first position. Even the gap between the first and the second result is notable, the first being significantly more valuable.

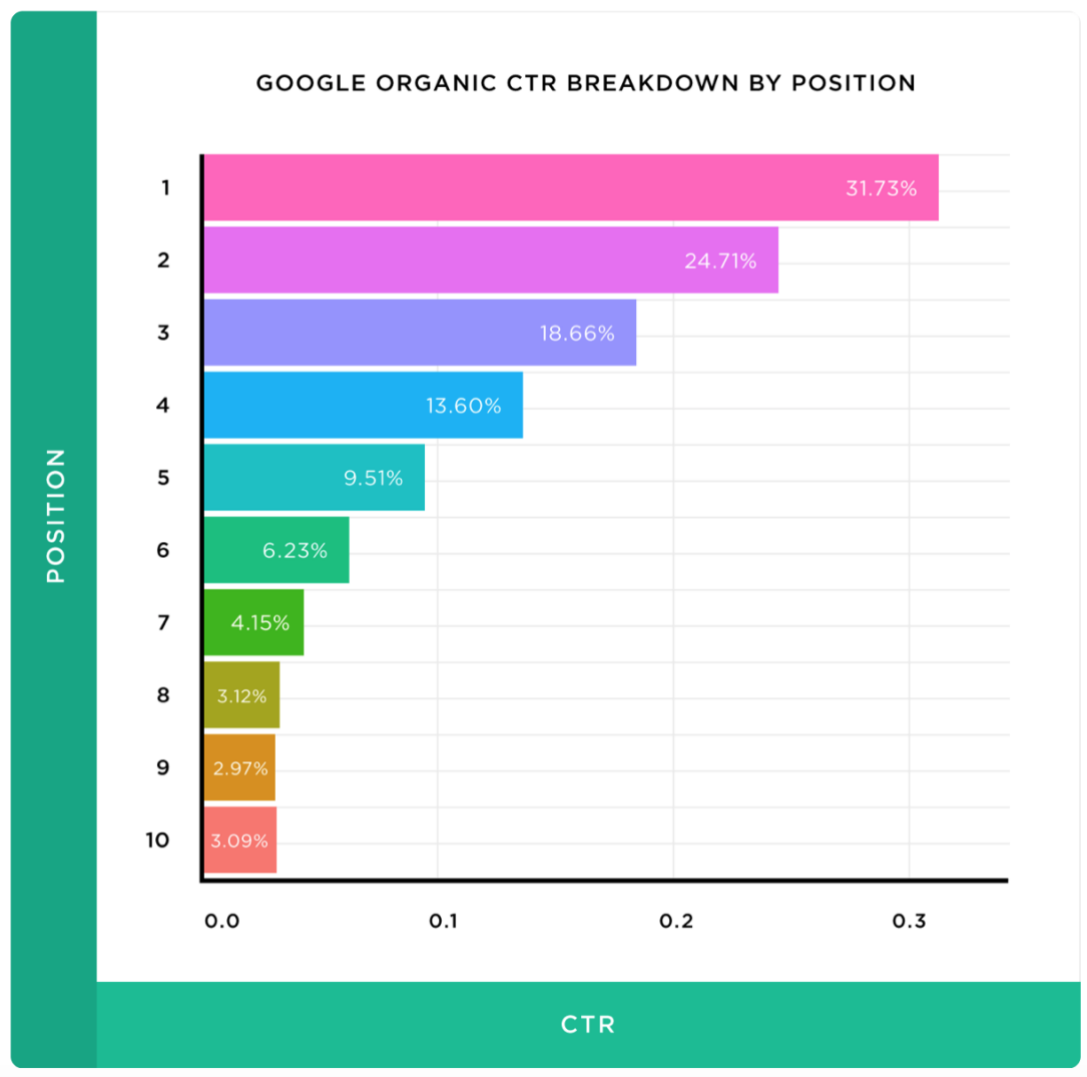


Figure 8. Google Organic Click-Through Breakdown by Position (Dean, 2020).

Today Google is considered to have over 200 factors and signals to determine which sites rank higher in the results. For instance, how many external links are pointing to the web site, how trustworthy these linking sites are, how many social mentions the brand has, how relevant the web page is and how old the web site is or how fast the site loads. (Clarke 2015, 14; Chaffey et al. 2016, 487.) In addition, Google's 200 ranking algorithms are updated over 3000 times a year. Meaning that the marketer should be aware on constant changes. Google does not publish factors that affect algorithms, so they can only be guessed, of course, based on the scattered information that has been gathered. (Nada, 2020.)

Clark (2015, 14) summarized that Google's algorithms appreciate three key elements: *Trust*, *Authority* and *Relevance*. Meaning that high-quality content and reputable backlinks make web sites more *trustworthy*. Overall market strength and e.g. the amount of social media followers and backlinks compared to competitors give *authority* to web site. Additionally, contextual *relevance* is important for Google. The page more likely ranks higher in the SERP when these elements are emphasized.

Google's search ranking algorithms include both positive and negative filters. Positive factors increase web site's position on SERP. Whereas negative factors and filters are used for removing search engine spam (also web spam) from the index in case of if any signs of non-compliance with Google's instructions are found. (Chaffey et al. 2016, 487.)

In the image below (Figure 9.) Adam Nada has listed components of Google's ranking algorithm based on the collected data and analysis. His analysis presents that the most relevant ranking signals for Google is *Engagement* (20-23 percent), which refers to e.g. click-through rate (CTR) and bounce rate. Almost equally significant are *Off-Site links* (18-21 percent) that highlights the importance of good quality links and *On-Site content* (18-21 percent), which is about possessing the correct keywords and correctly formatted content on the web site.

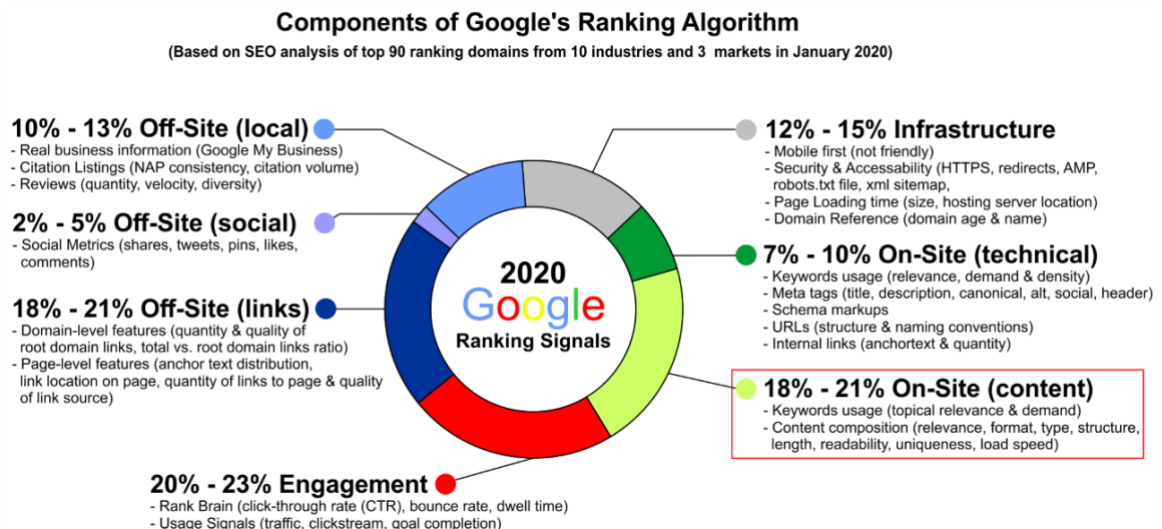


Figure 9. Components of Google's Ranking Algorithm (Created by the Author. Source: Nada, 2020).

In this study I am going to delve more thoroughly into the On-Page (also On-Site) content optimization regarding SEO and develop methods to carry out this optimization as efficiently as possible. On-Page optimization is discussed in more detailed in the Chapter 2.1.4.

2.1.3 SEO Methods

Maslow's hierarchy of needs is renowned psychological theory of fundamental human needs over more advanced needs. Rand Fishkin, in turn, made an adaptation of this fundamental concept and named it "Mozlow's hierarchy of SEO needs". Mozlow's hierarchy of SEO needs presents seven steps to successful SEO (Figure 10.). Like Maslow's theory, Mozlow's hierarchy is based on the same idea. The basic SEO needs are located at the bottom of the pyramid, and the advanced SEO needs are found at the very top the pyramid. Along the way towards the top of the pyramid, the competitiveness increases. (Moz, 2020.) The main steps in Figure 10. from bottom to top are as follows:

- I. *Crawl accessibility* so engines can reach and index the website
- II. *Compelling content* that answers searcher's query
- III. *Keyword optimized* to attract searchers and search engines
- IV. *Great user experience* including a fast load speed, ease of use, and compelling UI (user interface) on any device

- V. *Share-worthy content* that earns links, citations, and amplification
- VI. *Title, URL, & description* to draw high CTR (Click-through rate) in the rankings
- VII. *Snippet/schema markup* to stand out in SERPs



Figure 10. Mozlow's Hierarchy of SEO Needs (Created by the Author. Source: Moz, 2020).

SEO methods can be categorized into four groups (i) *Technical optimization*, (ii) *On-Page optimization*, (iii) *Off-Page optimization*, (iv) *Usability/Conversion optimization* (Figure 11.). (i) Technical optimization refers to web site performance and visibility – how search engines can access the site by indexing and crawling, schema, page speed, site structure and URL structure. (ii) On-Page optimization contains semantic content optimization, such as web sites' text, images, video or audio. Additionally, elements such as HTML tags and structured data which are only visible to search engines belong to this category. On this note, On-Page optimization is more thoroughly elaborated in Chapter 2.1.4. (iii) Off-Page optimization consists of link building and web sites' authority, relevance and trust. (iv) Usability/Conversion

optimization highlights user experience and conversion rate. Metrics of engagement and traffic are part of this category. (Maplesage, 2020.)



Figure 11. The Main Parts of SEO (Maplesage, 2020).

2.1.4 On-Page SEO

On-Page SEO (also On-Site SEO) is an optimization process to ensure that search engines can reach and find the web site well. And more specifically, On-Page SEO targets that: (i) the site content is readable and visible to search engines. (ii) The site is not blocking search engines. (iii) Search engines find the desired keywords. (Clarke 2016, 27).

When optimizing the web site for search engine to be able to find the relevant information and customer value, simultaneously the web site is also optimized for human eyes as well. (Decker, 2020). When a web site has semantic and optimal structure it provides better readability for both users and search engine crawlers. (Shenoy & Prubhu, 2016).

On-Page SEO is called 'on-page' because these optimization actions are visible on the web site, contrary to Technical SEO and Off-Page SEO that typically cannot be seen (Decker, 2020). However, one of the On-Page SEO advantages is that it is fully under the company's own control, as opposed to Off-Page SEO (Boskova & Pavlik, 2020).

Figure 12. summarizes the main factors related to On-Page SEO, and each of these are more thoroughly dealt with in the next paragraph.

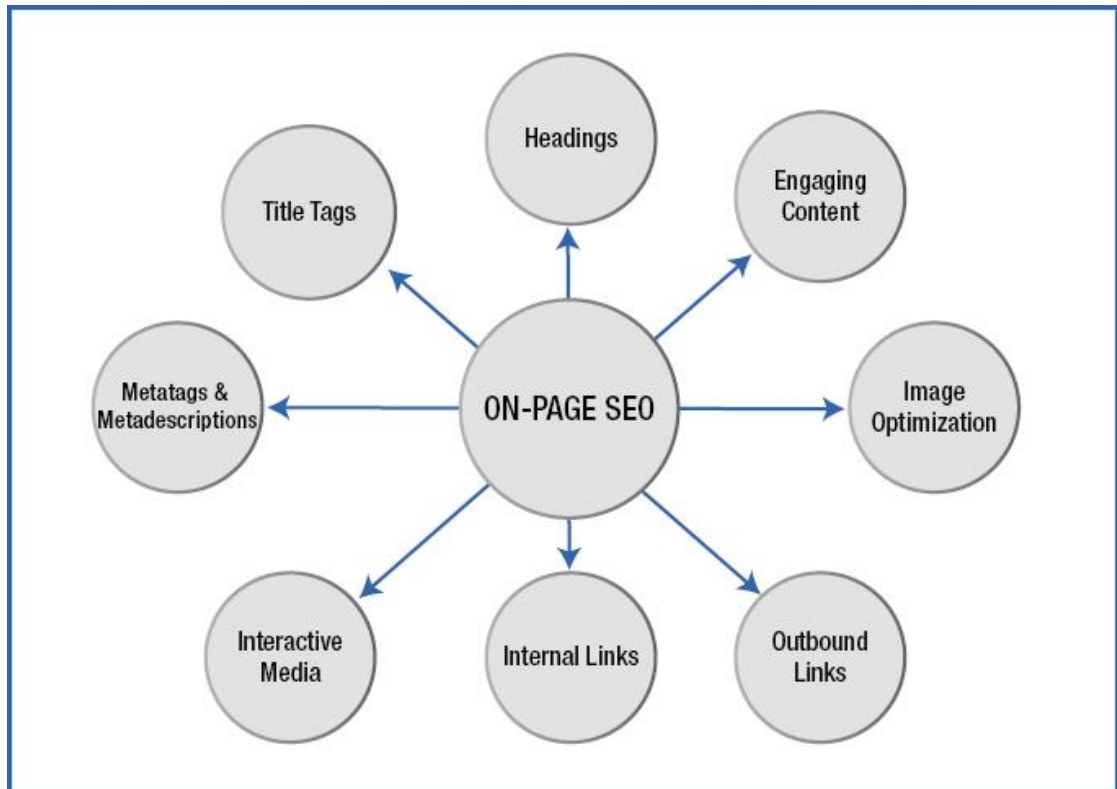


Figure 12. On-Page SEO Factors (Shenoy & Prubhu 2016).

Engaging content

The importance of engaging content cannot be highlighted enough. Content should be interesting, informative, meaningful and relevant to reader. Quality content is targeted with a personal feeling and solves a target customer's problem. Keywords need be used appropriately; content should not be filled with keywords, which search engines may penalized but they should be incorporated naturally to the content (keywords are more closely discussed in Chapter 2.1.5). Visual content is valuable - videos, images etc. Visitors will share appealing content more easily. Content should be updated on a regular basis, since search engines search for updated and fresh content. (Shenoy & Prubhu, 2016; Decker, 2020).

Web pages are evaluated by customers and search engines based on content. In that sense page content is in the center of On-Page SEO process. Thus, content development and optimizing is worthwhile investing to. (Decker, 2020).

Title tags

A title tag is an HTML element that specifies the web page's title. Tags are important in helping search engines understand what the web site is about, thus being a short description of a web site's content. Title tags are displayed on (i) SERPs as the clickable headline for a search result. Additionally, tags are displayed on (ii) web browsers and (iii) social networks. (Moz, 2020.)

Meta descriptions and meta keywords

The meta description is an HTML attribute that provides a brief summary of a web page and thus serves as an advertisement of the content for the searchers. Meta description should contain the keywords naturally (non-spammy way) and also, be a unique and relevant description of the page that appeals the reader to click to the web site.

Google does not use meta descriptions or meta keywords as ranking algorithms for web search but meta description tags are highly important in influencing click-through rates from SERPs. (Moz, 2020.)

Headings

Heading tags tell the topic on the page and thus are an important On-Page SEO factor. Relevant words should be used in the headings for readers and crawlers to find and understand content of the page. Using keywords in the beginning of a heading may lead to better results. There are different levels of headings; <h1> (heading 1) tag should be the main heading on the page, followed by <h2> and <h3>. (Shenoy & Prubhu, 2016.)

Image optimization and interactive media

The importance of interactive media, such as audio, video, images and infographics, has risen significantly. Using thumbnails and different angles of product images is recommended. However, it needs to be noted that image sizes should be optimal,

that it does not affect page-loading time. Alt text of the images should describe naturally what the image is about for the search engine bots to find it better. The importance of videos is significantly growing for marketing purposes and branding the product and company. Infographics are an informative way to present the content with images and only with a few words. (Shenoy & Prubhu, 2016.)

Internal and outbound links

Internal links point to another page on the particular web site. SEO-related research suggests that no page on the web site should be more than three clicks from the home page. If the web site is having a good link structure it is easily accessible for search engines to crawl. Typically, it also leads to excellent user experience (UX). (Shenoy & Prubhu, 2016.)

Outbound links (also external links) are links that point to another domain or web site. Typically, external links fall into Off-Page SEO category and therefore external links will not be discussed further in this context.

2.1.5 Keyword Research

In the previous chapter various On-Page SEO elements have been discussed. These elements are also important with regards to keyword research. According to Clarke (2016, 19-31) keyword research is an essential part of the SEO process and should be executed before On-Page SEO actions. Keyword research encompasses identifying words or phrases (also long-tail keywords or key phrases) which yield the best possible results on SERPs. By defining demand and competition concerning targeted keywords and phrases helps the marketer to understand target audiences' needs and wants better.

It needs to be noted, that targeted, informational and transactional long-tail keywords are typically keywords that convert the most. Single keywords are usually competitive and high ranking at SERP is difficult to achieve. Keywords or phrases should appear naturally on all the On-Page SEO factors such as content, title tags etc. Clarke (2016, 19-31.)

Key phrases are best identified via market knowledge in general, competitor's sites, search words from visitors that arrive to the site (from Web analytics), the internal

site search tool and keyword analysis tools e.g. Google Keyword Planner (Chaffey et al. 2016, 491).

2.1.6 International SEO

The target country of this development project is Sweden. Since the case company is Finland-based and all the company operations are located in Finland, there is a need to evaluate what kind of cultural aspects must be taken into account regarding SEO project.

It is essential that the content on the web site is created with the target audience in mind, which in this study are Swedish beauty professionals. Despite the fact that Sweden resides geographically next to Finland, there is a totally different viewpoint on colors, layout and style of humor. Cultural habits and differences are integral aspects; such as language, currency, contact information and even time zone. All of these factors indicate the visitor as well as search engine that they are on the correct web site. In an ideal situation, international SEO is nearly invisible to users. (Moz, 2020.)

It is recommended to use time to understand the audience, their behavior, preferences and habits before starting the SEO project to truly connect with the audience. By using terminology and keywords that are familiar to the audience is highly important. To begin with, it has been suggested first to find out: How the products are used in the target market and where do they buy it? What they call it? Who is writing about it? Are there any cultural sensitivities involved? Additionally, it is necessary to find out about competitors' advertisement and where do they get inbound links from. Reading local blogs and talking to people in the area is a good way to learn to understand the target audience and make connections with. (Kihlström, 2013). Linking to local content and building links from local resources are important in showing the search engines what the target country is. Since Google is the main search engine in Sweden as noted in Chapter 2.1.1. there is no need to gain visibility from local search engines. (Moz, 2020.)

2.1.7 Advantages and Disadvantages of SEO

According to Chaffey et al. (2016, 488) SEO has multiple benefits. It can be highlighted, that if SEO is successfully implemented, it can be a *significant traffic driver*. Successful SEO is also *highly targeted*, meaning that the visitors are motivated to purchase a product they are searching. Since there are no other expenses, besides the optimization process, SEO typically generates *low-cost visitors*. SEO is also *dynamic* in nature - the search engine robots are crawling pages on a daily basis, so new content is included relatively fast to search engine algorithms.

A disadvantage of SEO is its *lack of predictability*, meaning that SEO's Return on investment (ROI) is unreliable and highly competitive. *Time constraints* are also a challenge, it may take months for SEO results to be visible. SEO is *complex and dynamic in nature*; search engines' ranking factors are complex, weightings are not published, and they change through time. SEO is also an *ongoing investment* - new content and new links need to be created frequently. SEO has *deficiency in developing brand awareness*, searchers need to be familiar with the brand to be able to find it. (Chaffey et al. 2016, 488-489.)

2.2 Key Performance Indicators (KPIs)

Rapidly digitizing environment has increased the need to measure digital channels. The performance of e-commerce business can be measured with Key Performance Indicators (KPIs). KPIs help companies to form an effective digital marketing strategy and measure the performance against the estimated standards. (Saxena et al. 2019, 98.)

Chaffey and Smith (2013, 541) defines KPIs as follows: "Key performance indicators which identify the business's success criteria, results, data and measurements against benchmarks."

Karpenkova (2020) points out that following the right KPIs guides the marketer to right direction and avoids spending resources on actions that are not profitable. Properly chosen KPIs reveal SEO strategy's effectiveness, drives towards tangible results and directs to develop the right factors regarding the web site. It can be said

that KPIs act as a control system that reveals which SEO actions are working and which are not.

The following characteristics are expected to realize with regards to KPIs. KPIs should be (i) *Measurable*, meaning that e.g. the web site's usefulness to a user is difficult to measure but the time they stay on that particular web site can be measured. (ii) *Achievable*, referring that objectives need to be credible, well thought-out and limited so that KPIs provide correct and the right kind of information to support the decision. Lastly, KPIs need to be (iii) *Available* for certain periods of time to meet the deadlines. (Saura et al. 2017, 8-9.)

Additionally, marketing KPIs can be classified into three categories: *Financial*, *Website Performance* and *Social*. With Financial KPIs for instance total revenue, average customer value or cost per lead can be measured. Website performance KPIs are a good tool for assess customer behavior and demographics. It shows whether the web site attracts returning or new visitors, from where the traffic is coming from, how long the visitors spend and what they do on the site. In turn, Social KPIs evaluate the performance regarding social media marketing. (WebFx, 2020).

When defining KPIs the following targets need to be scrutinized to be able to find out whether the chosen goals are achieved.

- The baseline – what is the current level of the chosen metrics.
- The main objectives – e.g. increased sales, brand awareness, customer loyalty, or a combination of these.
- The strategy – digital marketing activities by which objectives are achieved.
- Channels – platforms e.g. website content, email marketing, social media etc.
- Time period – the time frame within which the objectives will be achieved.
- Growth forecast – target percentage or amount of increase in KPIs.

(Saxena et al. 2019, 102).

2.2.1 The KPI Pyramid

Each company needs to identify the most relevant KPIs for its business. Often this process may require multiple trials and errors. (Saura et al., 2017; 8-9.) This subchapter presents the KPI Pyramid that illustrates one perspective on how companies can group their objectives.

The KPI Pyramid is created by Pulizzi and Smith and it visualizes the KPI objectives that are divided into three sections: *Primary Objectives*, *Secondary Objectives* and *User Objectives* (Figure 13.). On top of the KPI Pyramid are the key figures that form the Primary Objectives for executive level. These figures are as follows: return on investment (ROI), sales, market share, customer acquisition vs. retention rates, net promoter scores (NPS) and sentiment scores.

Next section in the middle is the Secondary Objectives for managerial reports. This comprises visits, visitors, conversion rates, subscribers/customers, enquiries, orders, qualified leads, cost per visitor, cost per lead, cost per order/cost per customer acquired.

At the base of the KPI Pyramid are the User Objectives meaning the operational level information for analytics team. These include page views, duration, key phrases, top content, top landing pages, top referrers, A/B testing, page rank, engagement, comments, shares, cost per visitor and cost per like. (Chaffey & Smith 2017, 574-576.)

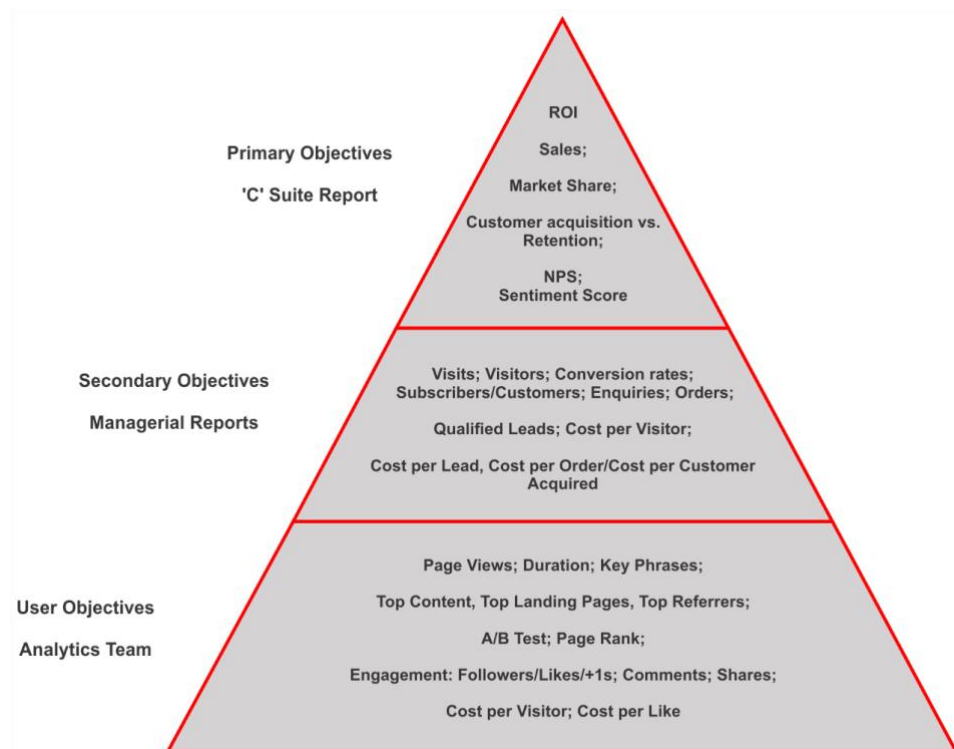


Figure 13. The KPI Pyramid (Created by the Author. Source: Chaffey & Smith 2017, 575).

Next, the KPI Pyramid is turned upside down to create a sales funnel (Figure 14.). In this version of the sales funnel, site visits and unique visitors create the widest section of the Pyramid. In the next stage visitors' actions can be measured: bounce rates, duration, page views etc. Some of the visitors are converted into leads taking the desired action: download, share, register etc. Ultimately, in the narrowest part of the KPI Pyramid part of the leads become customers and convert to sales and ROI.

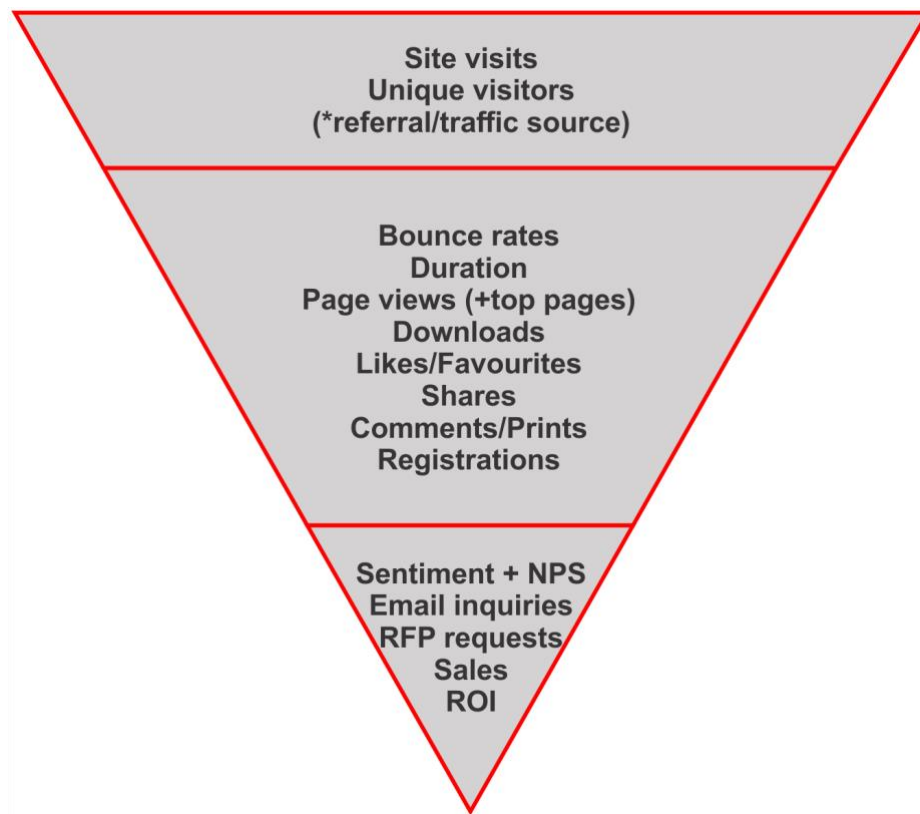


Figure 14. The KPI Pyramid Becomes a Sales Funnel (Created by the Author. Source: Chaffey & Smith 2017, 576).

2.2.2 Setting the Goals and Objectives

Chaffey et al. (2016, 196-205) highlights the importance of goal setting on Internet-related company strategies. To be able to monitor and improve the performance successfully, it is necessary to define the goals and objectives carefully and most importantly, the goals should be based on the company level objectives. The relationship between company's vision, goals, objectives, KPIs and metrics is represented in Figure 15.

Vision on top of the pyramid, is an executive level comprehension on how digital marketing contributes to the company's overall performance.

Goals are broad targets describing how the digital channels can benefit the company in its key business areas such as growing the sales and customer communication.

Objectives refers to SMART (*Specific-Measurable-Actionable-Relevant-Time-related*) objectives that define the direction and targets of specific improvements in the company. Objectives need to be *Specific* and unambiguous. Development of the objectives must be *Measurable*. Goals should be *Actionable*, meaning they are realistic and can be used to improve the performance. Additionally, goals should be *Relevant* and of essence to a company strategy and also, goals should have a *Time-bound* schedule. (Hamel 2009, 9.)

CSFs (Critical Success Factors) and *KPIs* are specific chosen metrics that are used to measure the performance against target.

Metrics and Measures are indicators to review the performance of using analytics systems.

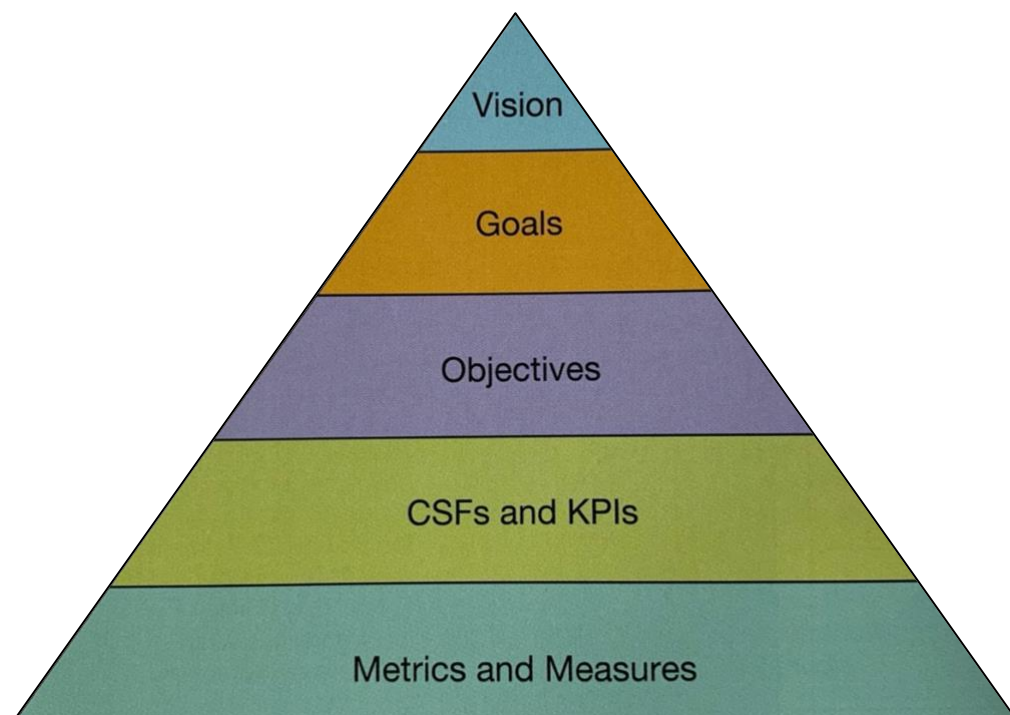


Figure 15. The Relationship Between Vision, Goals, Objectives and KPIs (Chaffey et al. 2016, 198).

2.2.3 On-Page SEO KPIs

Based on the literature (Saxena et. al 2019, 101; Chaffey & Smith 2013, 541-543; Saura et al. 2017, 4) there are various KPIs that provide insights regarding web site and digital marketing performance that the marketer should follow.

Web site KPIs are typically measured with Web analytics tools; one of the most used tools is Google Analytics. It is a free tool that can be used to track and report web site traffic. Google Analytics has four main reports: *Audience*, *Acquisition*, *Behavior* and *Conversion* which allow the marketer to measure the visitors' entire journey from entering to the web site to purchase or leaving the site. (Saxena et. al 2019, 103-104 ; Polymetric Digital, 2020 ; Chaffey et al. 2016, 203-204, 567.)

This study is focusing on developing and analyzing web site's On-Page SEO. Thus, KPIs that can be used to measure the performance of On-Page SEO are represented below via Google Analytics reports (Audience, Acquisition, Behavior and Conversion).

(i) Audience

Audience report shows how much traffic the web site has and what kind of audience visits the site. It shows if visitors are new or returning and what types of devices they use when visiting the site. Audience report also shows general demographics of the visitors. Traffic is a good indicator to assess overall changes in the web site, thus it is a good indicator for On-Page SEO actions.

Metrics:

- *Average Session Duration* (average time spent during a session)
- *Bounce Rate* (the percentage of visitors leaving immediately after viewing one page)
- *Sessions* (indicates how many times a visitor has come to the site. Sessions shows how many visitors can potentially be converted to new customers.)
- *Pages/Session* (how many pages the visitor views, thus, how many opportunities the marketer has for communicating the chosen message)

(ii) Acquisition

Acquisition report displays a performance metrics overview of the marketing channels. This report shows how many users are coming from each channel (organic search, paid search, direct, email, referral or social sources). In addition, what is each channel's behavior what comes to bounce rates, views per session and conversion rates. This report gives valuable insights into which channel is performing better than the others.

Metrics:

- *Top Channels* (what channels drive traffic to the site at a high level)

(iii) Behavior

Behavior report reveals what the visitors do on the web site. It gives information about how visitors navigate on the pages and how they resonate with the content. This gives insights about the content strategy and user experience (UX). Behavior report is important regarding On-Page SEO since it shows which pages are more popular than others.

Metrics:

- *Average Time on Page* (shows how long visitor stay on a single web page. More time the visitors spent on the web site reveals how engaged they are and how much they value the site. This typically converts to purchase.)
- *Page Views* (metric covers how many pages have been browsed. This is important since this helps to reveal the pages that are important to visitors and to create similar topics to attract even bigger audience.)
- *Top Exit pages* (describes the pages that expel the most visitors)
- *Checkout funnel* (how many of the visitors purchased? This is an important quality measure.)

(iv) Conversion

Conversion can be anything the company wants the visitor to execute, for instance signing up for an email letter or fill in a registration form. Conversion can also be product sales compared to the previous time period.

Metrics:

- *Conversions* (shows data about some specific action that has been pre-determined)

The next chapter scrutinizes how KPIs can be measured and reported by using Web analytics. Typical purposes for using Web analytics in companies, and the capabilities Web analytics introduction requires from a company are discussed. An important factor to represent is the Web analytics framework, which is dealt with in depth. Finally, the barriers and limitations for Web analytics adoption are discussed.

2.3 Is Web Analytics rather Business analytics?

Web analytics is defined as “the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage” (Web Analytics Association 2008, 3). However, it has been criticized that this definition is too narrow. It has been suggested that 'optimizing Web usage' should be replaced with 'digital marketing optimization' to cover all online marketing activities with the core in reporting, analysis, testing and improvement. (Chaffey & Patron 2012, 35.)

Stéphane Hamel (2009, 2) has suggested the broadest interpretation of Web analytics: “The extensive use of quantitative and qualitative data (primarily, but not limited to online data), statistical analysis, explanatory (e.g. multivariate testing) and predictive models (e.g. behavioral targeting), business process analysis and fact-based management to drive a continuous improvement of online activities; resulting in higher ROI.”

Jim Sterne (founder of the Web Analytics Association and producer of the eMetrics) stated: "it was a mistake to call it web analytics, it is business analysis". (Hamel 2009, 18.)

In that sense Jim Sterne's definition may well be accurate since digitalization pushes businesses constantly towards more e-business and thus need for deeper understanding and adoption of web analytics is required in companies. Web analysis should form a basis for decision making in business operations on the company level.

Literature notes, that Web analytics is a form of a science which combines statistics, information technology, economic, management, marketing principles and also other fields. Web analytics itself is a quite new form of a science new but its underlying concepts on the contrary are not. (Hamel 2009, 2.)

2.3.1 The Purpose of Web Analytics

Web analytics data are collected to understand online customer behavior, effectiveness of online marketing activities and to optimize digital marketing means. One undeniable advantage of Web analytics is that the collected data represents objective figures of online customer behavior and thus, the company's business performance. Whereas the traditional measurement methods such as surveys and interviews are more vulnerable to response bias. (Järvinen & Karjaluoto 2015, 1, 9.)

The expansion of digital operating environment has increased the number of digital tools available for companies for marketing purposes. Digitalization has also had a positive effect on measuring; with the help of digital tools, marketing has become easier to measure. There is a wide variety of tools for the marketer to access, collect, process and report data. (Järvinen et al. 2012, 102.)

A survey of 700 digital marketers was executed in 2011 by Econsultancy-RedEye. The report showed the purposes companies are using Web analytics and how they rated their performance (Figure 16.). Web analytics usage was the highest to identify Key Performance Indicators (KPIs). Companies replied that the main improvement needed to be done was "*Align keywords, calls to action and landing pages*". Testing multiple landing pages was the least executed in digital analytics practices according to this study. (Chaffey & Patron 2012, 31.)

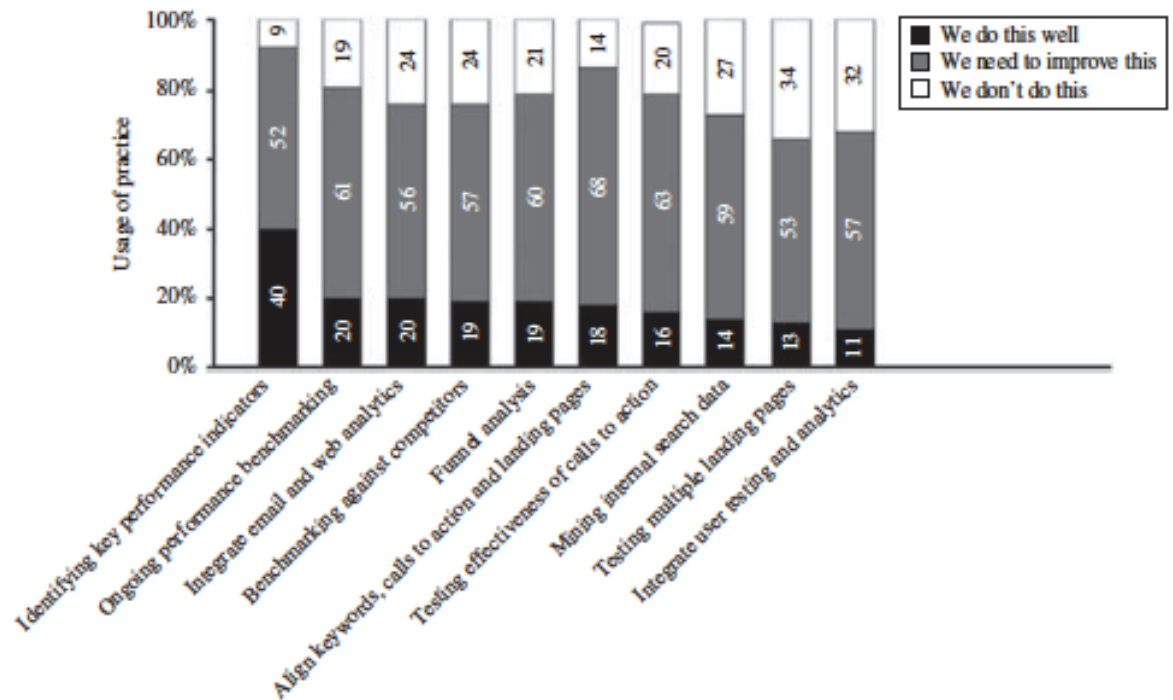


Figure 16. Usage and Performance of Web Analytics by Digital Marketers (Chaffey & Patron 2012, 31. Source: Econsultancy-RedEye).

Another example of a research made on the use of Web analytics is the outlook survey conducted by The Web Analytics Association. The research showed the following targets for which companies use Web analytics (the highest per cent listed first).

- *Optimizing website functionality and conversion (79.7 per cent)*
- *Analysis of past performance (73.7 per cent)*
- *Optimizing performance of and conversions from marketing campaigns (67.3 per cent)*
- *Determining the best creative executions through a/b and multivariate testing (49.8 per cent)*
- *Baseline information for site redesign (48.6 per cent)*
- *Predictive metrics for developing future marketing campaigns (41 per cent)*
- *Budgeting and planning for upcoming business objectives (32.7 per cent)*
- *Other (5.6 per cent).*

(Chaffey & Patron 2012, 35.)

2.3.2 Web Analytics Optimization Process

How should a Web analytics optimization process start? Hamel (2009, 7) suggests that it is best to proceed by identifying Key Business Drivers and define stakeholders and their short terms goals (Figure 17.). In the next phase, Key Performance Indicators (KPIs) are defined. KPIs reveal whether stakeholders are proceeding towards their goals. By using this model, it is possible to gain fast but possibly only a small success through Web analytics. This model also highlights that starting to change Overall Business Strategy at the very top is too risky and can lead to resistance and uncertainties. On the other hand, it is not good to start straight from the Metrics either since it may lead to irrelevant amount of data without a purpose and insight.



Figure 17. The Web Analytics Roadmap (Hamel 2009, 7).

To be able to execute a coordinated and structured measurement process, the following four steps should be performed (Figure 18.). (i) *Goal setting* refers to the first stage where targets are defined by answering the question "What do we want to achieve?" (ii) *Performance measurement* involves collecting the data and creates understanding of "What is happening?". (iii) *Performance diagnosis* is analysis to understand the reasons behind the data and answers the question "Why is it happening?" (iv) *Corrective actions* are implemented if there is variance between the targeted goals and achieved results. Then there is a need to consider "What should

we do about it?" Typically, the performance measurement process is an iterative cycle which is repeated over and over again, with adapted targets, if needed. (Chaffey et al. 2016, 554).

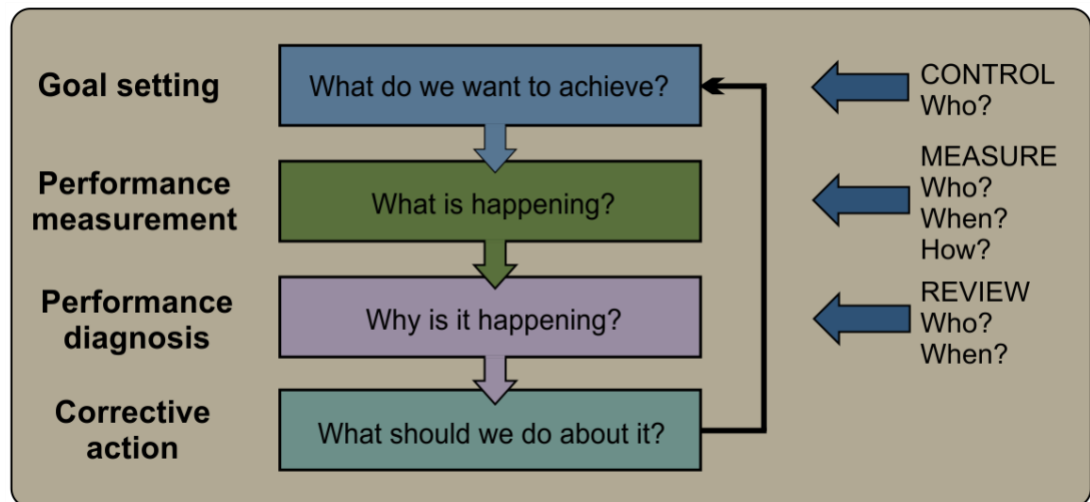


Figure 18. The Performance Measurement Process (Created by the Author. Source: Chaffey et al. 2016, 555).

Company's capabilities should be considered as an integral part of the Web analytics optimization process. When optimizing the Web analytics processes a range of factors should be addressed. Company's current Web analytics capabilities should be assessed against the best practices to be able to improve Web analytics processes further. Figure 19. represents how metrics and tools are obligatory for improving Web analytics capabilities. On the other hand, processes and people are needed to develop the quality of management processes further. These factors form an entity which further develops digital marketing performance. (Chaffey & Patron 2012, 37.)

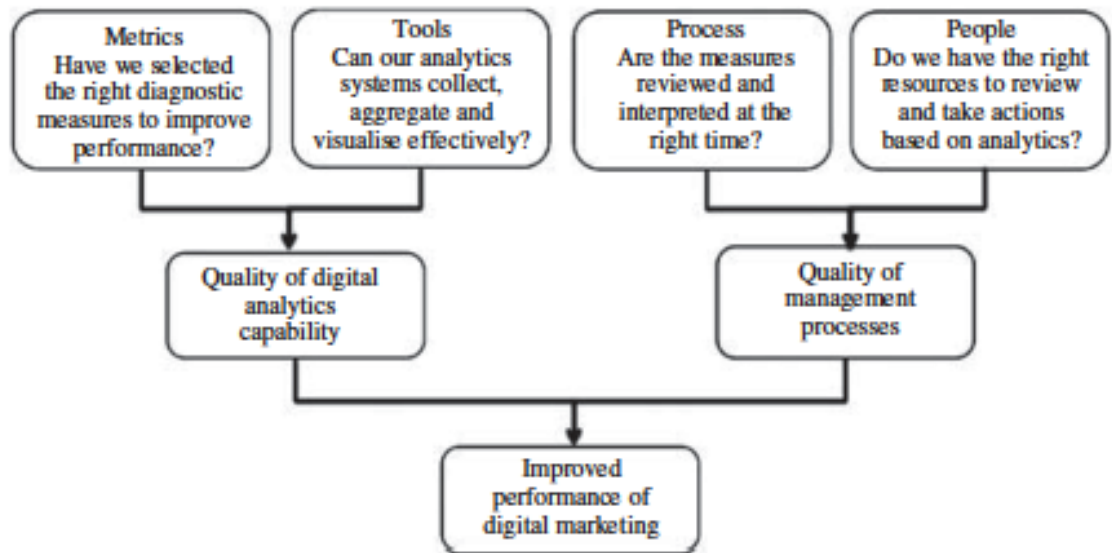


Figure 19. Key Factors Required for Analytics-Driven Performance Improvements
(Source: Smartinsights.com. Chaffey & Patron 2012, 37.)

Stéphane Hamel (2009, 5) and Chaffey and Patron (2012, 36-37) categorize companies' Web analytics capabilities into six areas:

1. *Management, Governance and Adoption* - Executives need to understand the importance of Web analytics beyond being just a reporting system and also define clear responsibilities for Web analytics.
2. *Objectives definition* - Answers the question if Web analytics goals are clearly defined?
3. *Scoping* - Sets the focus and scope for Web analytics such as a conversion optimization or digital marketing in general.
4. *Analytics team and expertise* - Assesses the current Web analytics capabilities on the company level.
5. *Continuous improvement process and analysis methodology* - The approach where Web analytics shifts from a reporting tool towards a more proactive and responsive information source to support the decision making.

6. *Tools, Technology and Data Integration* - Technical infrastructure including software and various data sources that generate reports and informative visualizations.

2.3.3 Optimization Process Framework

It has been recognized by Hamel (2009, 13-15) that improvement process should be a continuous process which is based on the analysis methodology. Chaffey and Patron (2012, 37) suggests that optimization development process could use other already established approaches designed for processes improvement, such as *Lean Six Sigma methodology*. Six Sigma methodology aims to improve the efficiency and effectiveness of business performance, it targets on process enhancement and reduces the defects of the process.

The scholarly literature (Chaffey & Patron 2012, 37) has also noted that Lean Six Sigma methodology is a suitable framework for quantitative business process improvements, such as Web analytics. Lean Six Sigma methodology is driven by a *DMAIC* concept that recognizes, measures, evaluates, improves and controls the process (Figure 20.). (Kumar, 2018).



Figure 20. DMAIC Approach in Lean Six Sigma Methodology (Kumar, 2018).

The DMAIC (*Define-Measure-Analyze-Improve-Control*) improvement framework can also be applied on Web analytics measurements. As an example, Econsultancy-RedEye has used a simplified version of the DMAIC framework for Web analytics to improve conversion rates (Figure 21.). Econsultancy-RedEye approach highlights the importance of first setting clear business goals and KPIs (*Measure*). Second, to execute various analyses e.g. regarding content and user needs (*Analyse*). Third, to create a testing plan to prioritize tests (*Test*). Fourth, developing matters that need development in the light of testing (*Optimize*). Then continue to step one and measure achieved results again, then continue the process so that a continuous cycle is achieved. (Chaffey & Patron 2012, 38-39.)

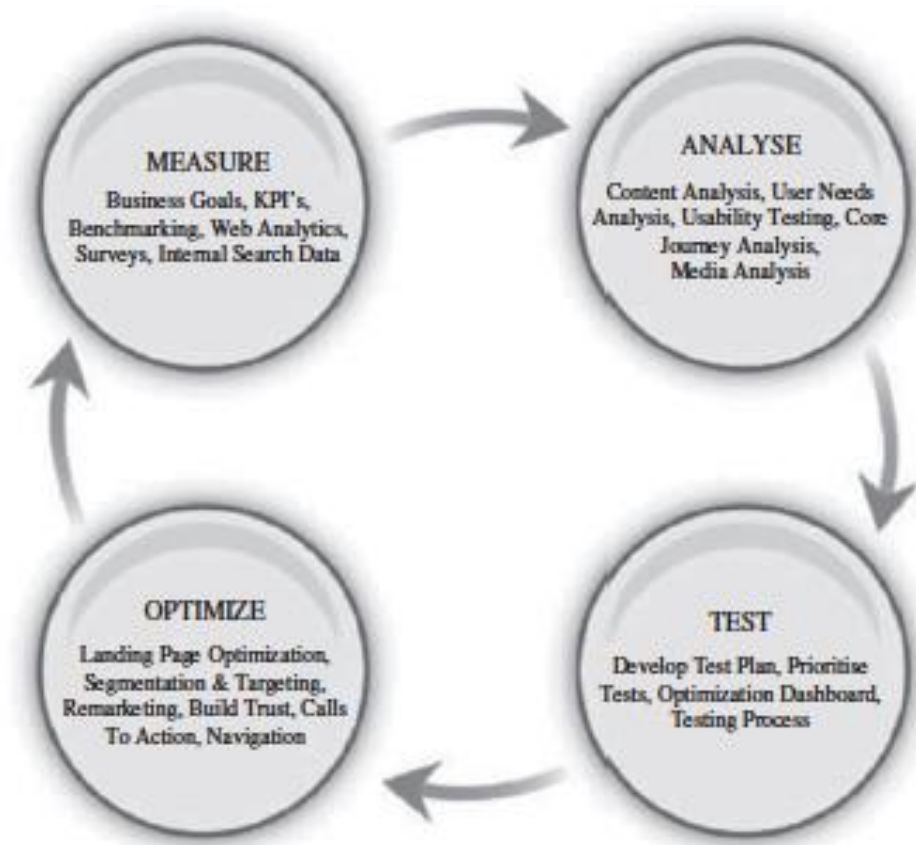


Figure 21. Improvement Process for Conversion Rate Optimization (Source: Econsultancy-Econsultancy-RedEye. Chaffey & Patron 2012, 37).

Chaffey and Patron (2012, 38-39) notes that there is such a wide range of potential measures available for online marketing that it is essential to decide the

predominant metrics that drive the business performance. A good starting point is to distinguish performance metrics and KPIs. Typically, KPIs represent the overall performance of a process and its sub-processes. Whereas performance metrics are used to evaluate and improve the efficiency of marketing activities.

Web analytics provides different kinds of data for various purposes. Grouping quantities within a measurement or KPI framework is needed in making the analysis relevant to people working in various positions in the company. Meaning that different quantities can be reviewed by different team members according to their responsibility areas. The measurement framework can be represented in the form of physical reports and dashboards that provide a detailed analysis to inform decisions.

Besides defining the right people, tools and processes, a method for defining relevant KPIs is needed. Chaffey and Patron (2012, 41) suggests that in the digital marketing KPI framework customer acquisition, conversion and retention should be evaluated separately.

RACE framework (*Reach - Act - Convert - Engage*) by Dave Chaffey/Smart Insights is developed to accomplish this differentiation (Figure 22.). *Reach* in this framework means building awareness of the brand, its products and services outside of the web site and driving traffic to company's web site and social media channels. *Act* is about encouraging visitors to stay after arriving the web site. Interest is pursued via relevant and targeted content and clear navigation. *Convert* - visitor commits to relationship which generates commercial value. *Engagement* refers to building a long-term relationship with the customer via e-mail or social media marketing. (Chaffey & Patron 2012, 41-42.)

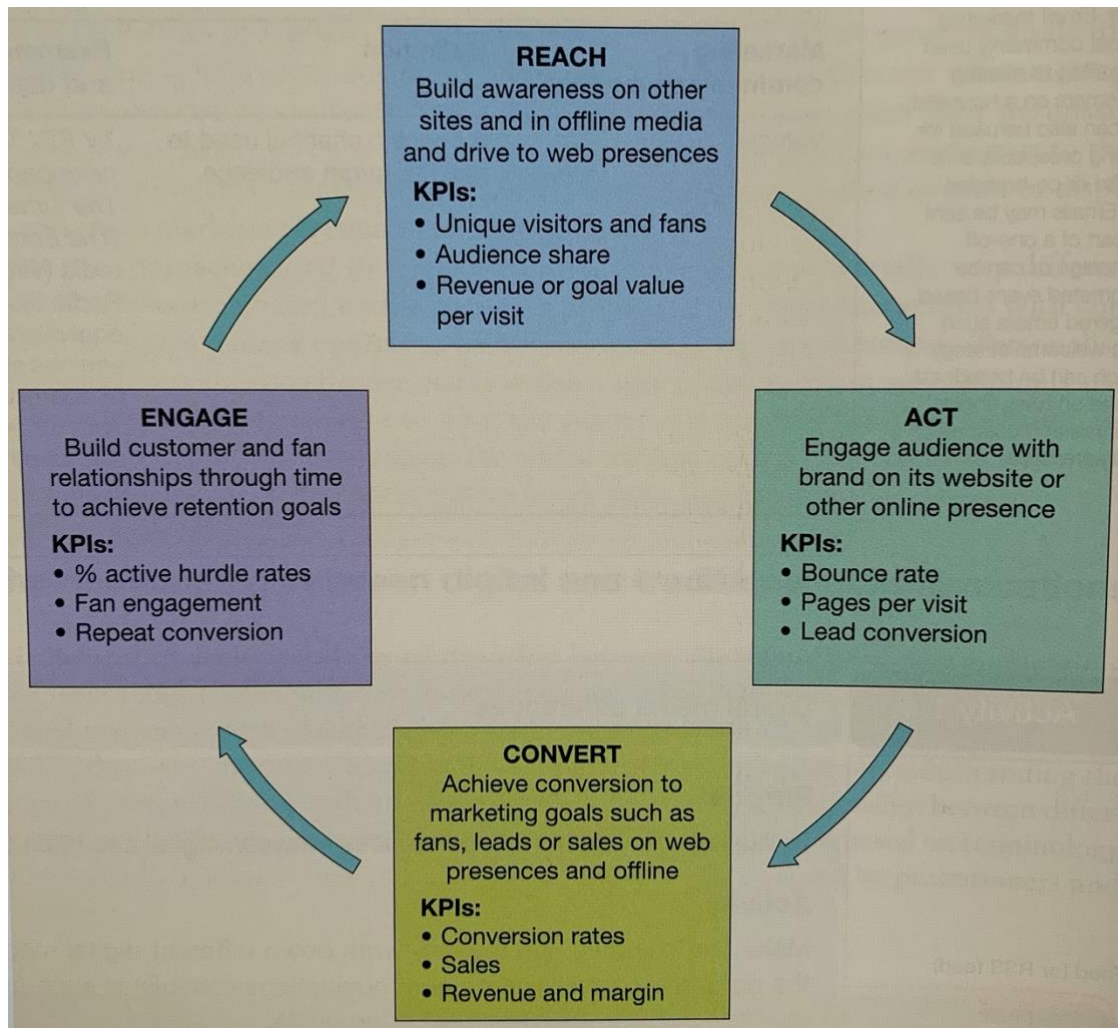


Figure 22. RACE Framework Including KPIs (Chaffey et al. 2016, 32).

According to Coursaris et al. (2013, 2-5.) another model that has been proven to work in terms of measuring Web analytics performance is the REAN model (*Reach - Engage - Activate - Nurture*) popularized by Steve Jackson and originally created by Xavier Blanc (Figure 23.). The REAN model is said to be a relevant framework to measure the web site's performance, define measurement strategy and also, to plan optimization activities.

It has been stated that all the commercial web sites need a REAN model. This statement is justified by the fact that all web sites need to reach the potential customers, engage with the customers, activate them and also, nurture them so that they will return to the site.

In the following each stage of the REAN model will be described in a detailed manner.

Reach

The target is to generate traffic to the web site. Traffic can come to the web site from various sources: (i) Direct traffic - visitor types the URL directly into the browser. (ii) Referral traffic - visitor visits the web site via a link from another web site. (iii) Organic search traffic - the traffic is generated by unpaid listings on the SERP. (iv) Paid search traffic - the traffic is generated by paid listings on the SERP.

In Chapter 2.1.2 has been described in detail the importance of getting high results on the SERP to improve the visibility in order to attract more traffic to the web site.

Engage

Engagement means how people interact with the company. Engagement is a process that helps potential customers to make decision before points of actions (e.g. browsing the web site further, purchasing decisions etc.).

Activate

Activation refers to the point where a visitor has converted to a certain action, such as purchased a product or registered to the web site. Conversion rate gives data on how well visitors are converting to the desired action, and thus an important metrics to follow.

Nurture

Nurture is a method of retaining and re-engaging with an already activated customer. It is necessary to ensure that the customer has a reason to come to the web site again, thus building customer loyalty is highly important. However, it has been said that there is a limited amount of actionable resources to increase web site e-loyalty, but the best practices used in the Social Networking Sites may be one angle to increase loyalty.

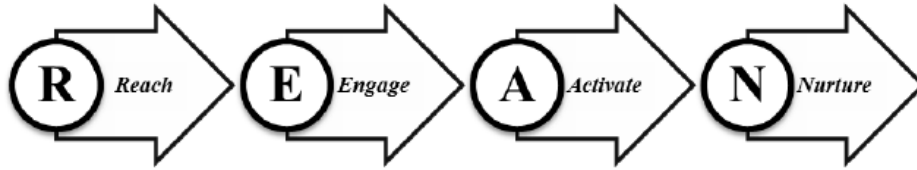


Figure 23. The REAN Model (Coursaris et al. 2013, 2).

When comparing these two presented models, RACE and REAN, it can be noticed that they are very similar. In fact, RACE model is created on the foundation of the REAN framework. The main differences are in step two where RACE highlights more initial interactions with a brand and step four, where RACE stresses customer engagement being a longer-term process (Chaffey, 2020).

The REAN framework, which is the original framework, has primarily been used in this study. However, some aspects of the RACE model have also been adapted. This decision is justified by the fact that the RACE model highlights more the step two, "Act", which is a very important factor regarding the aims of this study to gain more visitors to the web site and engage them with relevant content so that they do not leave the site. The bounce rates (i.e. immediate exit from the web site) are at many sites relatively high, which makes it challenging getting the audience to act or participate (Chaffey, 2020). Bounce rates in the case company's web site are examined in this study as one indicator of engagement.

Lean Six Sigma - DMAIC has been used as a framework for the whole development project regarding generating more organic traffic to the web site. Whereas, the REAN framework and parts of RACE models form a framework for measuring and developing the web site performance via Web analytics. The framework of this study has further been detailed in Chapter 2.4.

2.3.4 Barriers and Limitations of Web Analytics

Despite of the fact that Web analytics is widely used in millions of websites around the globe, academic research has shown that Web analytics usage is not highly consistent. Literature suggests that companies are still not fully utilizing Web

analytics technology - adoption rate of the Web analytic tools is high, but the usage is low. However, it has been elaborated that research is limited in the field of Web analytics. Moreover, several studies have shown that Web analytics is utilized randomly, and data is not used for strategic decision making. Thus, the overall benefits of Web analytics remain vague. (Järvinen & Karjaluoto 2015; Järvinen et al., 2012; Chaffey & Patron 2012, 30-32.)

There are several reasons behind the fact that Web analytics is not benefitting companies to its greatest potential. In particular, lack of resources and budgets have been recognized as main barriers. Also, the lack of strategy and company culture form barriers to effective use of Web analytics. Additionally, it has been seen that the lack of a structured testing plan is one of the reasons why Web analytics is not applied in a more consistent way. In recent years barriers have shifted from technology-based to people and process-based issues. (Chaffey & Patron 2012, 30-38.)

In the survey by The Web Analytics Association challenges regarding implementing Web analytics have been recognized. Companies have stated that the biggest obstacles are (highest percentage being first):

- *Acting on the data to improve site performance (69.2 per cent)*
- *Business decisions driven by analytics (63.5 per cent)*
- *Best practices implementation (48.1 per cent)*
- *KPI development (40.6 per cent)*
- *Developing process / implementing process (40.1 per cent)*
- *Executive management awareness and support (41 per cent)*
- *Integration of current and new solutions (36.7 per cent)*

(Chaffey & Patron 2012, 33.)

The study executed by Järvinen and Karjaluoto (2015) suggests that the use of Web analytics as marketing metrics systems and the resulting outcome of the data cannot be understood unless the results cannot be interpreted in the company. Reasoning behind the metrics, metrics data processing and the organizational context need to be taken into consideration when evaluating the results. By this, more truthful results can be achieved to back up effective decision making.

Hamel (2009) describes metrics to be "just numbers and indicators without meaning and significance". Only analysts' interpretation turns them into insights and recommendations. To be able to do that, the analyst needs to understand the correlations, the context and the business environment.

Additionally, Chaffey and Patron (2012, 33-38.) believes that, the best results are gained when data analyst understands senior managers' problems and then provides solutions through analytics.

It has been identified that there are some notable limitations using Web analytics data. Namely, the data can only look back and cannot predict the future. It only provides information on customer behavior in the past but cannot give any future perspective regarding customer intentions. Another weakness is that the data is solely quantitative, and thus cannot be used to assess qualitative matters such as brand image or customer satisfaction which is important in maintaining customer relationships. (Järvinen & Karjaluoto 2015, 9.)

2.4 A Framework for the Study

Based on the literature review a framework for this study has been created (Figure 24.). The main concepts of the study are SEO, KPIs and Web analytics. These three areas form a basic foundation for the study. Arrows in the Figure 24. show the dependency of these key concepts.

As the research problem points, the aim is to find out how to generate more organic traffic to the web site by utilizing On-page SEO actions. Mozlow's hierarchy of SEO needs gives the context of SEO actions that are typically executed in order to get a good ranking in search results and improve competitiveness.

SMART (Specific-Measurable-Actionable-Relevant-Time-related) objectives have served as guidelines when defining KPIs for the case company's development project. KPIs are developed and analyzed to find the most significant factors to improve the company's web site to correspond to the target segment - beauty professionals - needs.

Lean Six Sigma - DMAIC framework forms an outline for the whole development project. Whereas, the REAN framework and parts of RACE models build a framework for measuring and developing the web site performance.

Web analytics and more specifically, Google Analytics and SCM analysis tool are used to measure the web site's KPIs. The company's capabilities for adopting Web analytics are discussed since literature has shown that these are an essential part of overall successful Web analytics adoption.

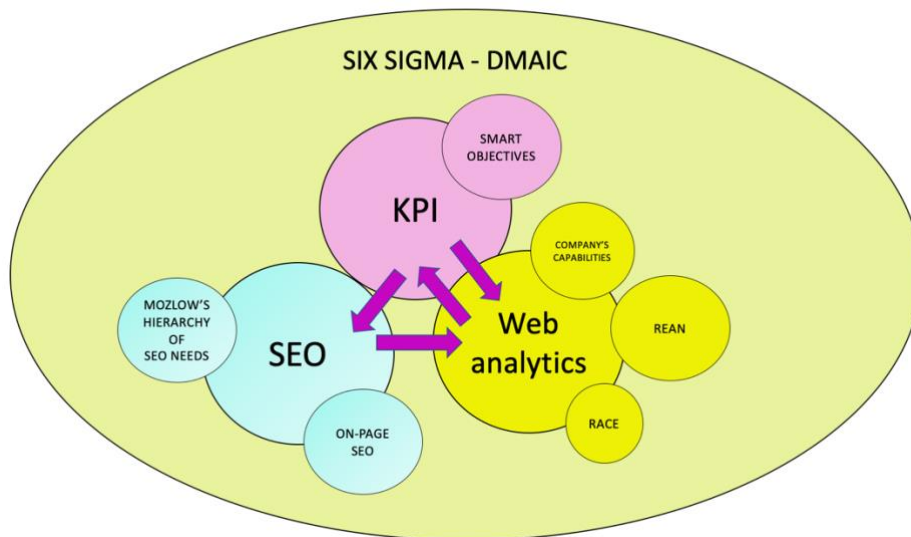


Figure 24. Framework of this Study (Created by the Author).

The next Chapter delves into the research methodology used in this development project.

3 Methodology

The methodology used in this study is represented in this Chapter. The overarching target is to find answers to the research question and sub-question.

The chosen research approach is a quantitative study and the methodology used in this study is Action research. Quantitative data is derived from the secondary sources using Google Analytics and SCM analysis tool.

The research context encapsulates the incoming traffic to the company's web site. However, the target segment is beauty professionals in the Sweden market area.

Below, the theory of research process is first introduced. Subsequently, the reasoning process behind the research problem and research question are discussed. Additionally, a description is provided, why Action research was chosen as the methodology for this development project, and light is shed on how Action research is carried out in organizations. Lastly, the concrete implementation of this development project has been represented.

3.1 Research Process

Research has been described (Swanson & Holton III 2005, 4-5.) as "*an orderly investigative process for the purpose of creating new knowledge.*" Typically, a general research process begins with a problem and ends with a conclusion. However, research is not just a problem-solving method since problem-solving is situational and judged by the results. This indicates that research is more thorough than problem-solving, and research aims to foster new knowledge that can be further utilized in future studies. Taken together, research comprises systematic problem-solving and generation of new knowledge. In research, data is purposefully retained and reported. (Swanson & Holton III 2005, 4-5.)

Swanson and Holton III (2005, 7-8) describes that *theory, research, development, and practice* form a cycle that allows ideas to evolve from concepts to practices and from practices to concepts (Figure 25.). Theory is in the middle as a cornerstone for research, practice and development. The cycle illustrates feedback loops wherein dynamic multidirectional interactions between different blocks advance each block individually and at the same time the entire scheme advances. Notable is, that the process of knowledge generation can start from any point of the cycle.

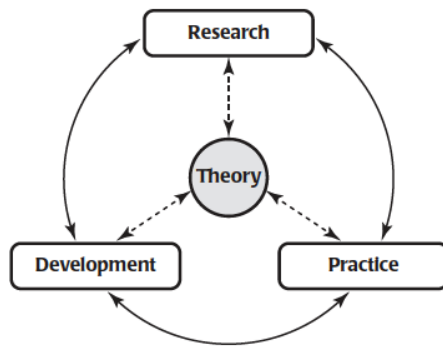


Figure 25. Theory - Research - Development - Practice Cycle (Swanson & Holton III 2005, 8.)

3.2 Formulating the Research Question

In the Figure 26. the research process in organizations has been presented. The schema shows that first the initial problem should be identified. After this, the content for the research is considered, including gaining experience via literature and experience, understanding mental models and processes in organizational level. In the next phase the research problem can be stated. The research question develops out of the research problem and is considered alongside with the research paradigm, research method and research context. Meaning that generating a research question is an iterative process that evolves and continues until the planning decisions are made in the last phase. (Swanson & Holton III 2005, 12-25.)

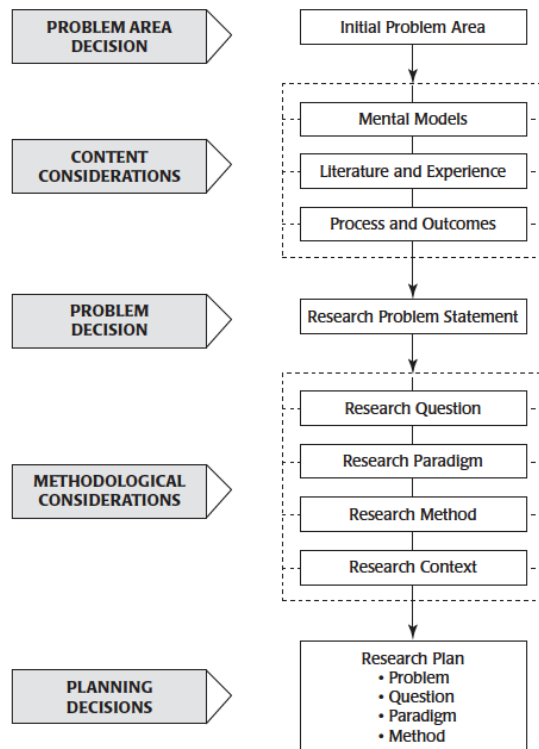


Figure 26. Research Process in Organizations (Swanson & Holton III 2005, 13.)

Regarding this study, the initial problem area was discovered at the very early stage of the study, and the research problem was formulated as follows "How to generate more organic traffic to web site via Search Engine Optimization (SEO) by targeting B-to-B segment (beauty professionals)?" Deciding the research problem was quite straightforward process which started from the needs of the company. Additionally, the research problem encompasses a wider scope since it also affects other companies extensively, as increasing organic traffic to a web site is a cost-effective way to increase sales.

The research context encompasses the traffic coming to the company's web site. On this note, the target segment is beauty professionals in Sweden market area (more elaborated in Chapter 1.5).

However, formulating the research question was not as straightforward and the research question was changed multiple times during the process of framing the research. As the literature review proceeded and the knowledge base increased, the research question was adapted to answer more specifically to the research problem.

The research question ended being: "How to implement Search Engine Optimization (SEO) to improve Key Performance Indicators (KPIs)?"

Additionally, the sub-question was added to justify the measurement process of the SEO results via Web analytics. The sub-question to complement the research question is: "How Web analytics framework is utilized to measure the results of SEO?"

3.3 Research Methodology and Research Approach

The research methodology of this development project is Action Research. For the research approach, a quantitative study has been used. The data has been collected from secondary data base(s) and measured with Web analytics. This sub-chapter exposes why these choices have been made in the context of this study.

As mentioned above, the research methodology is Action Research. Swanson and Holton III (2005, 395) notes that Action Research combines three elements: research, action and participation. Action Research targets to learning and generating new knowledge whereby social and organizational change is achieved. The Idea is to link "theory to practice and practice to theory" in the knowledge creation process.

Coghlan and Brannick (2014, 6) defines Action Research as:

- *research in action, rather than research about action;*
- *a collaborative democratic partnership;*
- *a sequence of events and an approach to problem-solving.*

This indicates that a specific dilemma needs to be addressed via planning action, taking action, and evaluating action which leads to further planning. These Action Research cycles follow sequentially each other and form the Action Research spiral. Coghlan and Brannick (2014, 11) demonstrates the Spiral of Action Research Cycles in the Figure 27.

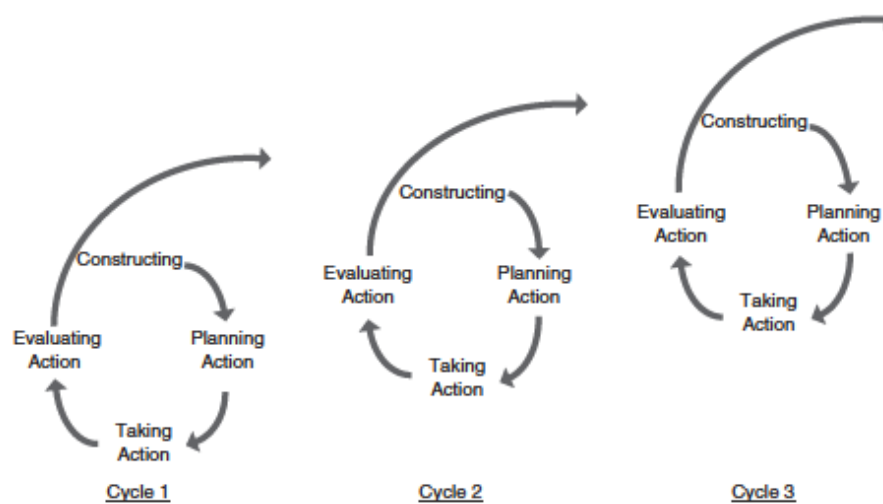


Figure 27. Spiral of Action Research Cycles (Coghlan & Brannick 2014, 11).

Action Research is well-suited for the purposes of this study since this is a development project. As the knowledge regarding successful SEO actions increases, the Action Research cycle proceeds to the next phase, and consequently, a new cycle begins. Additionally, Coghlan and Brannick (2014, 6) suggested that Action Research is a collaborative and democratic partnership, which means that the researcher is typically involved actively in the company operations and in cyclical process outlined above. In this regard, the case company seeks to create a solution to a practical dilemma (increasing organic traffic), and simultaneously Action Research generates valuable new information regarding visitor behavior in the web site.

Action Research can be applied for both quantitative and qualitative approaches, however the qualitative method is predominant (Swanson & Holton III 2005, 376-377).

In this study the Research approach is quantitative. The literature notes that quantitative methods are practical when large sample groups (e.g. groups of people) are being studied. In particular, for making generalizations beyond the sample under scrutiny. (Swanson & Holton III 2005, 30.) The major principles of quantitative research are the cause and effect approaches, finding out the important variables, and setting up relevant hypotheses and questions. Moreover, quantitative research

applies measurements and observations, and tests various theories. (Creswell 2003, 18).

According to Swanson and Holton III (2005, 32) the quantitative research process consists of the following steps:

1. *Determining basic questions to be answered by study*
2. *Determining participants in the study (population and sample)*
3. *Selecting the methods needed to answer questions*
 - a. *Variables*
 - b. *Measures of the variables*
 - c. *Overall design*
4. *Selecting analysis tools*
5. *Understanding and interpreting the results*

The quantitative approach is chosen for this study because a large group of people is being studied. The sample population consists of visitors browsing the company's web site. Visitor's behavior is measured via Web analytic tools such as Google Analytics and SCM analysis tool. Both of the tools have been developed to measure quantitative indicators. Choosing to use quantitative approach is justified on the basis of knowledge gained from the literature and the nature of the study.

The research question of the study ("How to implement Search Engine Optimization (SEO) to improve Key Performance Indicators (KPIs)?") is formulated in a way that it can be difficult to measure the SEO development regarding KPIs by any other means besides measuring the visitors' behavior on the web site. Thus, the quantitative approach gives the information that is needed to understand visitor behavior and thus to develop SEO further.

3.4 Setting the KPIs for the Case Company

As discussed in the literature review (Chapter 2.2), the KPIs should meet certain criteria. In this subchapter these requirements have been applied to the target company's KPIs definition process.

As noted, the KPIs should be measurable, achievable and available for certain periods of time. All these requirements are met regarding KPI definition for the case company. KPIs are measurable with Web analytics, and more specifically, with

Google Analytics and SCM analysis tool. KPIs are also achievable, meaning that they are carefully thought-out and limited so that they generate relevant information to support the decisions regarding the development of KPIs. Also, KPIs are available until further notice yet possibly new improved KPIs are introduced.

Moreover, as earlier discussed, KPIs can be classified into three categories. Regarding the case company, two categories are followed: Website Performance and Financial KPIs. Social KPIs, on the other hand, are typically dealt with tracking social media marketing performance, and thus are excluded from this study.

In addition, the following KPI targets were assessed from the perspective of the target company to determine whether the objectives were met.

- The baseline – the current level on the chosen metrics are defined (presented in the data analysis Appendix 1.)
- The main objectives – these are separately defined for each KPIs (presented in the Table 1.)
- The strategy – objectives are achieved with On-Page SEO actions
- Channels – web site as the platform
- Time period – the time frame within which the objectives will be achieved (presented in the data analysis Appendix 1.)
- Growth forecast – target percentage or amount increase in KPIs (presented in the in the Table 1.)

As Chaffey et al.'s (2016, 196-205) pyramid presents (discussed in Chapter 2.2.2) KPIs are a part of a higher hierarchy system which aims to achieving the company's vision and goals (Figure 28.).

The case company's vision is to raise the importance of e-commerce and thus, increase the investments towards the web site. This has been taken into account in budgeting and setting the goals for the web shop for the coming accounting period.

Setting the objectives according to SMART (Specific-Measurable-Actionable-Relevant-Time-related) principles (Table 1.), defines the direction and targets to developments while respecting SMART principles.

By using metrics and measures, the case company's KPIs (presented in the Table 1.) are measured via using Google Analytics and SCM analysis tool.

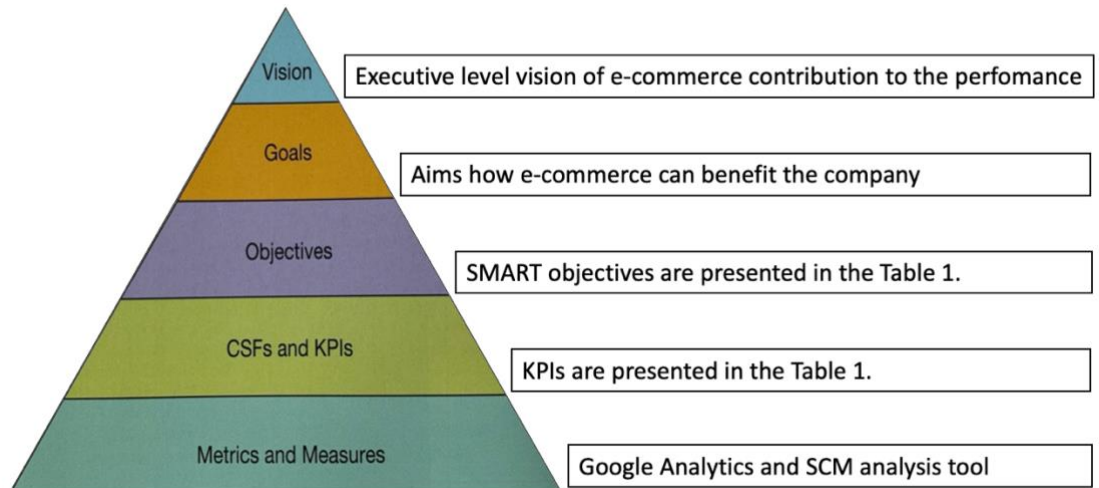


Figure 28. Performance Targets and Measures of the Case Company (Created by the Author. Source: Chaffey et al. 2016, 198).

The Table 1. illustrates the case company's KPIs and On-Page SEO actions that target to improve the KPIs.

The first column from the left represents the REAN model that has been used as a framework in this study to measure the web site performance. All the metrics have been classified under either Reach, Engage, Activate or Nurture stages.

In the next column are introduced the case company's SMART objectives. Each objective includes a concrete growth rate. SMART objectives have been chosen to respect the case company's goals and vision towards e-commerce growth.

Metrics/KPIs column displays metrics that have been selected to follow the development regarding On-Page SEO actions. The next column shows the factors that can be used to influence the given metric through SEO.

The Measure column indicates the report from which the data is obtained. In the last column is the Classification in which the KPI falls.

Table 1. Summary of KPIs and On-Page SEO Actions Regarding Case Company (Created by the Author).

REAN	Objectives (SMART)	Metrics / KPIs	SEO actions	Measure (GA= Google Analytics)	Classification
REACH	Increase organic traffic 20%	Top channels for incoming traffic	Title tags, Meta keywords and Meta descriptions, Headings, Image optimization, Interactive media, Outbound links, Keyword research	GA: Acquisition	Web site performance
ENGAGE (RACE model ACT)	Increase the session length 20%	Average Session Duration	Engaging content, Image optimization, Interactive media, Internal links, Keyword research	GA: Audience	Web site performance
	Decrease bounce rate 20%	Bounce Rate		GA: Audience	Web site performance
	Increase the amount of quality traffic 20%	Sessions		GA: Audience	Web site performance
	Increase pages / session 20%	Pages / Session		GA: Audience	Web site performance
	Increase average time on page 20%	Average Time on Page		GA: Behavior	Web site performance
	Increase page views 20%	Page Views		GA: Behavior	Web site performance
	Decrease specified exit pages	Top Exit pages		GA: Behavior	Web site performance
	Increase conversion 50%	Checkout funnel		GA: Behavior	Web site performance
ACTIVATE	Increase number of registrations 20%	Registrations conversion	Engaging content, Image optimization, Interactive media, Internal links, Keyword research	GA: Conversion	Web site performance
	(Objectives N/A - data already exists)	All time sales, Gross margin and Profit		SCM analysis tool	Financial
	Increase the sales according to the budget 15%	Customer, Orders, Sales, Gross margin €, Gross margin %		SCM analysis tool	Financial
NURTURE	Increase loyalty 20%	Returning Visitor	Engaging content	GA: Audience	Web site performance

3.5 Data Collection and Analysis

This study utilizes data from the secondary sources. The data has been collected from Google Analytics and SCM analysis tools.

As previously discussed in the literature review, Web analytics adoption rate is high among companies. One of the reasons is most likely because some of the Web analytics tools, such as Google Analytics, can be utilized free of charge. (Järvinen & Karjaluo (2015, 1). Thus, there is a low threshold for Web analytics deployment.

Google Analytics is a quantitative analytics tool that can be for example used for measuring web site's volume of clicks, to assess from which source the visitors come from, and to have insight about visitors' behavior on the web site. (Coursaris et al. 2013, 5.)

Regarding the case company in this report, Google Analytics forms the core of the performance measurement of the company's web site. Google Analytics has been

implemented to the case company's web site several years ago, meaning that data history has accumulated, and it is available for analyses. This is a primary reason why Google Analytics was chosen as a Web analytics tool in this study. The other reason is, that On-Page SEO development is well suited to be measured using Web analytics.

The other analysis tool used in this study is SCM analysis tool that the case company uses for monitoring profitability in the company. SCM tool utilizes the company's ERP-data and gives information on multiple levels regarding customers, products, campaigns, sales channels, suppliers etc. In terms of scope of this study, Sweden web site's sales, gross margin and profit has been scrutinized via SCM tool. Additionally, trends regarding customers, orders and delivered packages are followed and analyzed. Results of the aforementioned key figures are elaborated in Chapter 4.

3.6 Validity and Reliability

Regarding validity and reliability of the secondary data, it needs to be considered that it was originally collected for some other purposes than solving the Action research question. Thus, the secondary data should be evaluated in the light of the research question, additionally the secondary data availability and accuracy needs to be taken into account. To ensure the worth, validity and reliability of the data, the following questions should be reviewed: (i) Who collected the data? (ii) When was it collected? (iii) What was collected? (iv) Why was it collected? (Coghlan & Brannick 2014, 91.)

Swanson and Holton III (2005, 35) notes that: "*Measures are said to be valid if they measure what they are supposed to measure.*" Typically, a reliable measure leads to reproducible and consistent results.

One undeniable advantage of using Web analytics is that the collected data presents objective figures of an online customer behavior and thus, the company's business performance. Whereas the traditional measurement methods such as surveys and interviews are more vulnerable to response bias. (Järvinen & Karjaluoto 2015, 9.)

However, as pondered in the literature review (Chapter 2.3.4) Web analytics data is just irrelevant numbers without significance - only interpretation and analyzing gives the value to the data. So that the analyst is able to give the executives suggestions

based on the analyzed data, it is important to understand the business context and reasoning behind the metrics. There is a risk of distortion in the figures if they are misinterpreted or the cause and effect relationships are not understood.

Additionally, the possibility of human error must be taken into account when assessing the reliability of the study. Google Analytics and other Web analytics tools can generate incorrect information if the set parameters (such as date and country under consideration) are incorrect. Or, if the figures in the report cannot be interpreted correctly. The possibility of this error can be reduced by carefully reviewing Google Analytics instructions.

Regarding this study, it can be stated that the author has the basic knowledge of Google Analytics and SCM analysis tool, and the reports are carefully generated from the platform. The interpretation and analysis of the data has been done by the author with 14 years of experience in the company and more than 20 years in the industry. This can be considered to significantly reduce the possibility of misinterpretation, but the possibility of errors can never be completely ruled out due to human factors. However, with careful data processing the errors can be noticeably reduced.

3.7 Conducting the Development Project

This study started by defining the research problem area in the beginning of 2020. At first, the literature was studied to scrutinize what kind of a research had already been done regarding SEO. The gained insights clarified and specified the overall outline of the study.

In the next phase, the research question was created, however, it changed several times during the study to better answer the research problem. The research method was formulated in parallel with the research question. Thus, it became obvious that Action Research suits best for the purposes of this study and the quantitative approach is justified in order to measure the visitor data. The research context was defined in the very early stage since it was closely related to the research problem. For more elaborate descriptions on the research methodology, the reader is guided to review Chapters 3.2-3.3.

Early summer 2020, the planning decisions were completed, and the research plan was finalized including the research problem, research question and research methodology. After this the literature review writing process started and continued during the summer and autumn in addition to a day job. The framework for this study was designed on the basis of the literature review (presented in Chapter 2.4).

After the literature review had been completed and the framework for the study developed, the On-Page SEO actions were executed to the company's web site during the autumn. The development started on the On-Page SEO factors presented in Chapter 2.1.4 (Figure 12.). The development work done is described below.

In order to create SEO friendly content, a keyword research should be executed. Regarding this study, the keyword research was carried out by scrutinizing the competitors' web sites and Google search terms from Google Ads. Additionally, via Google Ads Keyword planner and by utilizing the author's market knowledge in general. However, as the author's native language is Finnish and Swedish is somewhat limited, the local translator plays a significant part in successful keyword implementation.

Informative, interesting, meaningful and relevant content is vital. The web site content adaptation started from the front page which was designed to be more informative and clearer. It was highlighted that the web site is for professionals only and this was displayed in a new banner at the top of the front page. Additionally, the main benefits for the customer are shown on the same banner. New banners were created to show the current campaigns and novelties. Moreover, new categories were formulated to present the current campaigns and customer benefits. Also, the order process is currently introduced on the top bar on the site. Regular content update on the web site is highly important for the web site's visibility and thus, it continues after this development project.

The original web site platform was lacking the functionality to execute metadescriptions, title tags and headings. These development steps were ordered from the web site platform developer. The SEO text creation on the aforementioned was left out of this project due to the tight schedule.

Some of the functionalities already existed on the web site platform, such as place for category (SEO) texts. Writing process of the category SEO texts began on autumn and continues further after this development project.

Regarding images on the web site, development actions regarding Alt text of the images had already been done earlier, meaning that all the images are automatically named according to the image content. Additionally, the image size had been optimized automatically so that it does not affect the site download speed. In terms of the products, special attention is being paid to the content creation regarding keywords, diverse product images and product videos, if available.

Even though all the actions planned regarding SEO have not been completed, due to the tight schedule of this development project, there was a need to measure the results achieved so far to have exemplary data and more importantly, to create a model for measuring On-Page SEO results. More accurate results will be achieved months later, when the majority of the abovementioned actions have been executed on the web site and the search engines have had time to evaluate the web site's content using their algorithms (more elaborated on Chapter 2.1.2). In order to be able to evaluate the results and draw broader conclusions of the development on the whole, it is important to wait long enough for the results to be valid and carry out further development.

In the scope of this study the results were measured from secondary sources with Web analytics (Google Analytics and SCM analysis tool) and analyzed in October. The Thesis project was completed in November 2020.

4 Results

As mentioned in the literature review, it is highly important to interpret the Web analytics data and understand the reasons behind the figures, otherwise they are just figures without meaning. In this chapter the results are represented, and discussion of the findings and more thorough analysis of the results is presented in the next Chapter 5.

Google Analytics reports (Audience, Acquisition, Behavior, Conversion) are introduced in Chapter 2.2.3 and presented here in the light of results to accomplish consistent data processing, and to enable meaningful discussion.

The data period is 1.9.2020-17.10.2020 which is compared to same time period previous year 1.9.2019-17.10.2019 to have a reference for changes on the web site. This data period has been chosen because SEO actions have been implemented to the web site during the autumn 2020. Additionally, the data period needed to be long enough to gain reliable data of the visitors since daily visitor amounts are relatively low. And third, it was required that the data was fresh to be used in this study.

Since the data from Google Analytics and SCM analysis tool includes key business figures, the exact results in the figure form are attached in Appendix 1. (confidential). Below, the results are revealed without the exact numerical key figures.

(i) Audience

Regarding Audience, the following metrics were scrutinized: Average Session Duration, Bounce Rate, Sessions and Pages/Session. The data revealed the following figures.

Average Session Duration was increased by 32 seconds in 2020 compared to the reference period in 2019.

Bounce Rate was increased by 18,56 percent in 2020 compared to the reference period in 2019.

Sessions was increased by 282 sessions in 2020 compared to the reference period in 2019. This equals to 7 percent growth.

Pages/Session was decreased by 25,16 percent in 2020 compared to the reference period in 2019.

(ii) Acquisition

The majority of the traffic came to the web site via Paid Search during the reference period 2019. Organic Search was on the second and Direct traffic on the third

position. Whereas in 2020, Organic traffic was the most important source of traffic, Email being the second and Direct traffic the third.

(iii) Behavior

In regards behavior, the following metrics were measured: Average Time on Page, Page Views, Top Exit pages and Checkout funnel. Here are the results:

Average Time on Page was increased by 13 seconds in 2020 compared to the reference period in 2019.

Page Views was decreased by nearly 20 percent (19,87 percent) in 2020 compared to the reference period in 2019.

Top Exit pages - the front page had the highest amount of exits in 2020. The second was login page and the third was forgotten password page. Among the 10 pages with the most exists, there were also two product pages.

Checkout funnel - conversion regarding how many of the visitors purchased was grown by 136 percent in 2020 compared to the reference period in 2019.

(iv) Conversion

With regards to conversion (registrations), three reference data periods (two periods in 2019 and one in 2020) were used to have a thorough situation analysis of the registrations made in comparison to the data period in 2020. Thus, a total of four periods were measured:

1.9.2020-17.10.2020 and the last year reference period 1.9.2019-17.10.2019

Additionally, in order to understand monthly changes, an equally long period of time was measured during 18.7.2020-31.8.2020 and 18.7.2019-31.8.2019 to serve as complementary reference data periods.

The data revealed that during the data period 1.9.2020-17.10.2020 the visitors made 36 percent more company registrations than during the reference period 1.9.2019-17.10.2019. Compared to the reference period 18.7.2020-31.8.2020, the registrations increased by 52 percent and to the reference period 18.7.2019-31.8.2019 the growth was 113 percent.

The student and salon employee registrations were practically flat over all the time periods.

(v) Other KPIs

The data (data period 1.9.2020-17.10.2020 and reference data period 1.9.2019-17.10.2019) comprises the number of customers, items sold, orders, sales, gross margin € and gross margin percent. Each of these key figures has been increasing from the previous year. The exact figures have been displayed in Appendix 1. (confidential).

5 Discussion

In the previous Chapter 4, the results of the data from Google Analytics and SMC analysis tool were presented. In this Chapter the results are further analyzed and discussed in the light of the literature. The results are also discussed via research question and it is evaluated whether the research question can be answered in terms of the results achieved. Additionally, managerial implications are suggested, and limitations of the study are discussed. Lastly, recommendations regarding future studies are presented.

5.1 Assessment of the Results in the Light of Literature

(i) Audience

As noted in Chapter 4, Average Session Duration has increased 32 seconds in 2020. This figure indicates the average Session duration. This is a good indicator; the visitors stay longer on the web site, thus the content is more appealing to them.

Bounce Rate has increased by 18,56 percent in 2020. Bounce rates show the percentage of visitors leaving immediately after viewing one page. Typical Bounce Rate for home page is 15 - 20 percent (Chaffey & Smith 2013, 287). Regarding the case company, Bounce Rate has increased almost 20 percent, which indicates negative progression. It needs to be examined whether the high Bounce Rate is e.g. affected by consumers entering the site and then leaving when they notice that the

web site is for professionals only. In some cases, the customer may search for information e.g. contact details and leaves the web site when the information is found. However, this should be more thoroughly examined since if Bounce Rate is high, Google may evaluate that the web site is not interesting to the visitor and it may affect the web site's ranking on the SERP.

Sessions has increased by 282 sessions in 2020. Sessions indicates how many times a unique visitor has come to the web site and actively spends time there. If a visitor is inactive for 30 minutes or more, any future activity counts towards a new session. Visitors that leave the site and return within 30 minutes are counted as a part of the original session. Sessions shows how many visitors can potentially be converted to new customers.

However, this is not the best suited metric for the case company since only beauty professionals are eligible to purchase and sometimes also consumers visit the site. Thus, it is better to analyze e.g. how many of the visitors (beauty professionals) log in or register at the web site. Registrations are addressed in (iv) Conversion.

Pages/Session has decreased 25,16 percent in 2020. This rate indicates that the visitors have viewed less pages during their session on the web site. Again, it would be necessary to find out how customers that are logged in behave on the web site. This would give more valuable data regarding the professionals' behavior.

It is to be noted that the total amount of users could potentially be an interesting figure in this context. However, regarding the case company, the amount of users does not give a completely correct estimation of the traffic since consumers cannot make purchases from B-to-B web site. It is assumable that some amount of the visitors are consumers who enter the web site. The message underlining that the web site is only for beauty professionals has been clarified on the front page of the web site. Because of these facts, the total amount of users was not included to the KPIs.

(ii) Acquisition

As the results show, in 2020 Organic Search was the most important source of traffic. Email was the second and Direct traffic the third. Whereas in 2019, the majority of

the traffic came via Paid Search, Organic Search being the second and Direct traffic on the third position.

The case company did not have paid campaigns in Google Ads during the data period in 2020 as they did during the reference period in 2019. By scrutinizing the organic search data more thoroughly, it can be seen that in 2020 there was 43 percent more users coming from the organic traffic than during the reference period in 2019. However, the total amount of the users decreased by 255 users from the 2019 figures. This indicates that less users have visited the web site but to an increasing extent they came to the web site via organic search.

Despite of these facts, it is too early to draw conclusions that the SEO actions executed on the web site affected the source of the traffic. Nonetheless, the trend is desired where organic traffic is the largest source of the traffic. In the longer term, the real impact of SEO actions on the traffic source can be measured more reliably after more SEO actions have been executed on the web site and search engines have had enough time to evaluate the pages.

Notable is also, that in 2020 email has become more important traffic source than the previous year. E-mail marketing has been invested in and it reflects to the results. The direct traffic was flat during both years.

(iii) Behavior

Average Time on Page shows how long the visitor stays on a single web page on the particular web site. The longer the visitors stay, it reveals how engaged they are and how much they value the page. This typically converts to purchase. It is a positive indicator, that the time has increased in the case company's web site, being 13 seconds longer in 2020 compared to the reference period in 2019.

Page Views decreased nearly 20 percent in 2020 compared to reference data period in 2019. Page views metric shows how many pages have been viewed totally in a certain time period. It can be noted that certain product pages' page views are significantly less than a year earlier. No changes were made regarding these pages, but this should be evaluated more thoroughly why page views decreased this much.

Regarding Top Exit pages can be noted that the front page has the highest amount of exits. This may relate to the fact that consumers enter the page and then exit when they discover that the web site is only for the professionals. Next most exits had the login page. This should be investigated more thoroughly, why visitors were not able to login and thus exit the site. Among the 10 pages with the most exits, there were also two product pages. Both of the products have been marketed lately and thus have provoked interest in visitors to click the products but then exit the page.

In terms of the checkout funnel, the data revealed that the conversion regarding how many of the visitors purchased, grew by 136 percent in 2020 compared to the reference period in 2019. This is desired development, but in the future, a longer time period should be assessed to gain an overall view of the progress on purchases. Additionally, it would be useful to have data of visitors that are logged in and measure their checkout funnel conversion. This could facilitate removing the potential consumer visitor bias that lies behind these measures.

(iv) Conversion

Conversions shows data about some specific action that has been pre-determined. In this case filling in the registration form was under scrutiny. Registrations are important since customers cannot purchase without being first registered as customers. All together four time periods were measured, and the data showed that registrations increased by 36-113 percent since last year and by 52 percent from the last month. This indicates that beauty professionals' interest is growing towards the case company's web site.

(v) Other KPIs

In addition to Google Analytics KPIs one of the important measures are financial measures regarding the number of customers, items sold, orders, sales, gross margin € and gross margin percent. These figures are followed through the SCM analysis tool which utilizes company's ERP-data. It is essential to monitor how the developments executed on the web site affect the sales figures, since this type of developmental work targets to increase the sales. When comparing the data in 2020 against the same time frame in 2019, it can be noticed, that each of the key figures has been increasing from the previous year. This indicates that the direction is as desired.

Conclusion of the Results

To summarize the results of the data analysis, there are positive indicators as well as negative signs. Positive is that the visitors stayed on the web site longer than a year ago and also, they spent more time on a single page on the web site. Additional positive trend is that the amount of sessions increased from the previous year. Conversion (registrations) also had a notably positive trend. Most importantly, all the financial metrics increased from the previous year.

A negative aspect is the bounce rate that increased significantly from the previous year. Also, visitors viewed less pages during their session than last year. Additionally, the total amount of the pages viewed decreased.

Regarding the source of the traffic no certain conclusions can be drawn whether SEO actions implemented to the web site had an effect to the increased amount of organic traffic. This is due to the fact that only a small amount of the SEO actions were executed on the web site and the search engines had a relatively short period of time to evaluate the pages and thus, to increase their findability.

5.2 Answers to the Research Question

When assessing the results and the literature review in the light of the research problem, research question and sub-question, the following conclusions as represented below can be drawn. Also, it is assessed if the main objectives of the study were filled.

(i) The research problem

The research problem was: "How to generate more organic traffic to web site via Search Engine Optimization (SEO) by targeting B-to-B segment (beauty professionals)?"

The literature revealed that the target segment's needs (here beauty professionals) have to be accounted for when executing On-Page SEO actions. This can be done via keyword research and creating engaging and optimized content to the target segment. Additionally, via multiple other On-Page SEO factors, such as optimizing metadescriptions, titles and headings and by using interactive media and internal

linking on the web site. All the aforementioned aspects need to be executed by highlighting international aspects and optimizing the content according to the local needs.

The results showed, that the organic traffic increased from the previous year. However, as noted in Chapter 5.1 no certain conclusions of the reasons behind the increased amount of organic traffic can be drawn. This is due to the fact that only a small amount of the SEO actions was executed to the web site at this stage. Additionally, search engines had a relatively short period of time to evaluate the pages and increase the visibility at SERP.

However, on the basis of the preliminary data, it can be stated that the direction is correct. By executing more SEO actions to the web site, it is possible to make sure that the SEO actions have affected the traffic when measuring the results over a longer period of time.

(ii) The research question

The research question was: "How to implement Search Engine Optimization (SEO) to improve Key Performance Indicators (KPIs)?"

Several KPIs were set to measure On-Page SEO actions executed on the web site. Preliminary data of the findings was collected but in order to make further conclusions, it is necessary to continue implementing unfinished SEO actions to the web site. It also takes time before the search results are visible on the SERP and the final estimation of the results can be derived.

By executing SEO actions, then measuring the data, analyzing the results, and developing the KPIs further, ultimately leads to the understanding what are the best practises regarding SEO for the case company.

This study is a development project and thus, the project continues further beyond this study. Thus, the research question can partially be answered based on the results of this study.

(iii) Sub-question to the research question

The sub-question was: "How Web analytics frameworks are utilized to measure the results of SEO?"

In this study Lean Six Sigma - DMAIC framework was used as an outline for the whole development project to improve the case company's SEO process from KPI definition to SEO implementation and measuring the results with Web analytics tools. DMAIC framework consists of the following steps: Define-Measure-Analyze-Improve-Control. In this study, the research problem was first defined. Second, the base level for KPIs was measured and third, these results were analyzed. As the fourth step, development (SEO) actions were implemented to the web site and then the control measurements were executed. In the future, the workflow could be continued to the second step again, so that the iterative cycle could be repeated.

The REAN framework and parts of RACE models built a framework for measuring and developing the web site performance (presented in the Table 1.).

From the RACE model, the second stage 'Act' was incorporated to the framework used in this study because engagement was emphasized. Encouraging the visitor to stay on the web site is a highly important KPI of the On-Page SEO.

Taken together, it can be stated that Web analytics framework was successfully utilized in this study to measure the results of the KPIs.

(iv) Main objectives of the study

This study had four main objectives: (i) Establish a list of relevant Web site KPIs and use targeted SEO processes to improve these. (ii) Execute On-Page SEO actions on the web site. (iii) Measure what kind of an impact the SEO actions have on the Web site performance. (iv) Create a process for the case company to develop SEO and Web analytics measurements further.

With reference to the above considerations, it can be stated that all the four objectives set for the study were met.

5.3 Managerial Implications

This study suggests five managerial implications for enhancing SEO and Web analytics processes.

First, since this study only produced preliminary data, the data measurement process should be completed in a way that several iterative loops would be implemented. In essence, remaining SEO actions should be first executed on the web site, then measure the results again and complete the analyses. Based on these analyses, it is to be decided whether the chosen SEO actions are performing well, and if the organic traffic increases.

Second, other parts of SEO (Technical optimization, Off-page optimization and Usability optimization) should be taken under scrutiny and evaluate what kind of actions need to be executed. Possibly new KPIs are needed to evaluate new areas of SEO, since the current metrics highlight On-Page SEO performance. It can be noted, that the same KPIs can be used to evaluate the results of the case company's web site performance in other target countries as well (Finland and Euro zone countries). Thus, the KPIs do not have to be country-specific, which significantly simplifies operations.

Third, a special feature of the case company's web site is that all the customers need first to register as a customer before the first order. This also sets different needs for measuring data than in most companies in which registering is not mandatory. Regarding the case company, the focus of the measurements thus needs to be on the customers that are logged in and scrutinize their behavior. By this, the effect of consumers (e.g. visitor amount in general) will have minimal effect on the results. Especially, more thorough research regarding negative bounce rate should be executed to find the profound reasons behind this fact.

Fourth, to facilitate convenient Web analytics data measurement and analyzing process, it should be evaluated if the company's capabilities could be improved. For instance, if all the necessary metrics would be available in a single view it would save time resources and make the metrics more convenient to implement for decision making.

Fifth, it is essential that there is a mutual agreement in the company for the goals and KPIs in regards the web site and how to achieve the targeted goals. Co-operation between the executive level and operational level is therefore vital to be able to improve Web analytics processes and to utilize Web analytics the most efficient way.

5.4 Limitations of the Study

The results of this study must be interpreted with certain precautions. First, as the literature notes (discussed in Chapter 2.1.7), SEO has its limitations. Even though the search engines crawl the web sites constantly searching for new content, the actual results may take months until they are visible at SERP. Therefore, the final results of this development study are reliable only approximately six months later. It is difficult to fully estimate how much developments made to the content so far has influenced the measures taken in the scope of this study.

Second, another characteristic of SEO is that optimization is a continuous project and thus, SEO actions need follow the improvement process in a cycle, where measure, analyze, test and optimize follows each other in a circle. Quite many improvements have been made to web site (more elaborated in Chapter 3.7). Therefore, it is difficult to find out which single change on the web site has caused changes in traffic.

Third, the scope of this study sets some limitations that need to be taken into account. Implementing SEO actions on the web site is a slow process because there are multiple matters to be optimized, e.g. category texts, other content texts, meta descriptions for the content as well as for the products, and titles need to be edited. The amount of work is remarkably large for a single person to accomplish alongside other work duties. It may take months until the majority of the SEO actions have been completed to the web site during the first iterative round. After this it may take months before the results become visible at SERP and reliable data is obtained. This implies that the whole cycle may take up to a year.

Fourth, international SEO (discussed in Chapter 2.1.6) needs to be assessed. Since the authors' native language is Finnish, all the texts are written in Finnish and then translated and adapted to Sweden markets. The local translator in Sweden is somewhat familiar with the beauty industry but is not a beauty professional which

can pose challenges in terms of professional terminology and keywords. As the case company is Finnish based without an office in Sweden, the market knowledge of Sweden is not as profound as it is regarding Finland. In the Swedish market, it is highly important that, for example, keywords are studied very carefully for SEO and in all marketing actions as well.

Another downside using Web analytics is that Web analytics only looks to the history and does not give any future perspective. This requires good understanding from the marketer to predict the changes and new trends in the markets. For example, Covid-19 pandemic turned the markets very unpredictable basically overnight and it was difficult to make any predictions for the future. In situations like this, the Web analytics data from the past was somewhat irrelevant since the market situation was totally new.

Lastly, there are certain caveats measuring the web site performance with Web analytics. As noted in Chapter 2.3.4, Google Analytics data is solely quantitative, and it does not consider question 'why'. The analyst can only make interpretation based on the data but basically the reasons why visitors acted the way they did, remains unanswered. The study is also partially affected by this since the author interpretation of the visitors' behavior based on the data was carried out.

5.5 Recommendations for Future Studies

Regarding the future studies, the following aims are proposed.

Due to the time constraints, this study was unable to measure and represent the results of the SEO developments on a longer follow-up period. Thus, a suggestion would be to execute a research on the effects of On-page SEO over a longer period of time.

This study was conducted in a B-to-B company whose page requires registration and approval of the target company before the first order is placed. Nevertheless, On-Page SEO metrics can be the same in B-to-C companies whose customers have a more straightforward ordering process. However, the measurement results can be very different when the target segment is less limited than the case company's and the business operates in a notably wider customer base. It would be suggested to

utilize the same KPIs and compare whether the results differ from each other and what causes the differences.

Additionally, as discussed in the literature (Chapter 2.3.4) companies have had difficulties to utilize Web analytics data in the strategic decision making in spite of the fact that Web analytics adoption rate is high. Academic research is still limited in the field of Web analytics which may lead to the fact that there are moderately few professionals working in the companies who are comfortable to measure, analyze and communicate findings to the managerial level. Or are there gaps between the operational level and executive level and the information does not move forward fluently? Therefore, more thorough research is suggested on how to improve the Web analytics data processing and interpretation to gain information for decision making.

6 Conclusion

Findability of the web site is crucial for the marketer in the intensifying competition situation. The goal is to get the customers adopt the REAN (Reach, Engage, Activate, Nurture) model steps from entering the web site, staying on the site, getting them to order (or convert some other desired way) and finally, returning to the site. In order for this cycle to start, the customer must land to the web site, in which SEO plays an important role.

SEO is an integral part of the digital marketing environment. Thus, it has a significant role in this modern environment, but it also needs other parts (e.g. effective analysis and competitive strategy) to harness its full potential, as demonstrated in Figure 1. Typically, the success of a web site does not depend on just one factor but rather is the sum of the whole.

In general, SEO is an optimization process executed to the web site in order to enhance the web site's informativeness in the eyes of the visitors and also, to increase the search engine findability. SEO can be divided to four main parts: On-Page SEO, Off-Page optimization, Technical optimization, and Usability optimization.

This study focused on On-Page SEO, however, all the main parts of SEO should be equally taken under scrutiny. This approach allows for comprehensive SEO for the web site.

It needs to be noted, that the requirements for SEO change rapidly. Search engines' algorithms change constantly, and the marketer needs to be alert how to optimize the web sites most efficiently. This requires recourses from the companies both on following the latest trends of SEO as well as executing the changes to the site. Successful SEO requires continuous development on the web site, with other marketing activities, such as Search Engine Marketing (SEM), which means paid marketing that improves the visibility in the SERP.

It is also important to have a mutual agreement in the company to understand how SEO can benefit the company and to achieve targeted goals and visions. Once clear KPIs have been decided, progress of the development should be measured and analyzed. Conclusions for further action can be drawn via through analyzes. This creates a culture of knowledge management where data is used to support decision making.

Regarding international SEO it is highly important to adapt to the target market area and make connections with the local stakeholders and build customer relationships. With regards to terminology and keywords, communication with the audience should be carried out similar to the local companies.

This study showed that an integration of Lean Six Sigma - DMAIC, REAN, and RACE frameworks can effectively be used in this type of a development project. Moreover, the study presents a model to measure On-Page SEO actions by utilizing KPIs. Even though this study was executed in the B-to-B company, the presented KPIs and Web analytics tools can well be applied to other businesses, for instance in B-to-C markets regardless of their geographical location or the size of the company. Thus, the represented framework is applicable for many kinds of businesses and market areas. Differences arise when analyzing the data, which is specific to each industry.

A special feature of the case company's web site is that all the visitors need first to register as a customer before the first order. This sets also different needs for data measurements than in most companies for which registering is not mandatory.

Regarding the case company, the measurements need to be focused on the customers that are logged in and scrutinize their behavior. Thus, the potential consumers are not affecting the data and consequent analyses.

It is noteworthy, that implementing SEO is a tedious project in which the results cannot be achieved overnight. In the context of this study, more time is needed to process the SEO actions further and for search engines to crawl the web sites. Only then reliable results are possible to achieve. This study was executed as a development project and the work continues further after this study.

The area of Web analytics is anticipated to change in the next few years with the increasing adoption of artificial intelligence (AI). The interpretation of data using AI will bring along changing metrics, and this will change the ways how the visitors' behavior on a web site is measured. These aspects also change the KPIs that now have been considered central in the literature. New Web analytics tools are constantly being developed, for example Google Analytics 4 has just been released, which represents major changes compared to the old version. Overall, the rapidly changing environment can pose challenges for both Web analytics development in companies and academic research, to keep up with the technological progress.

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