



Expertise
and insight
for the future

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Redesigning Web Analytics Services

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<p>The thesis aims to redesign the web analytics services based on the currently available services and products. The case company is a digital development company with project and consulting work. The main challenge was the lack of consistency in the analytics process.</p> <p>The study was based on the current state analysis, which revealed the strengths and weaknesses of the current situation. The current state analysis was based on a set of interviews, current process mapping, and available documentation.</p> <p>The proposal was built based on available literature and best practices from the industry to tackle the weaknesses and reinforce the strengths identified in the current state analysis. The focus was on creating a unified method, tools, and services to be utilized as a part of the process.</p> <p>The initial proposal was validated and modified based on the feedback. The final proposal was built based on available knowledge and the case company needs, making the analytics services more unified and providing tools to continuously increase the value of the services.</p>	
Keywords	Web analytics, process management, roles and responsibilities in web analytics, innovation portfolio

Tekijä Otsikko	Noora Virta Web Analytiikka palveluiden uudelleen suunnittelu
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<p>Opinnäytetyön tavoitteena on suunnitella verkkoanalyysipalvelut uudelleen nykyisten palvelujen ja tuotteiden perusteella. Kohdeyritys on digitaalisten palveluiden tuottaja ja kehittäjä, jolla on projekti- ja konsultaatiotoimintaa. Suurin haaste oli johdonmukaisuuden puute analyysiprosessissa.</p> <p>Tutkimus perustui nykytila-analyysiin, joka tarjosi nykytilanteen vahvuudet ja heikkoudet. Nykytila-analyysi perustui joukkoon haastatteluista, nykyisen prosessikartoitukseen ja saatavilla olevaan dokumentaatioon.</p> <p>Ehdotus rakennettiin käytettävissä olevan kirjallisuuden ja alan parhaiden käytäntöjen perusteella nykyisten heikkouksien voittamiseksi ja nykytila-analyysistä löytyneiden vahvuuksien nostamiseksi. Painopiste oli yhtenäisten menetelmien, työkalujen ja palveluiden luomisessa, joita voidaan hyödyntää osana muita prosesseja.</p> <p>Alkuperäinen ehdotus validoitiin ja tarkennettiin palautteen perusteella. Lopullinen ehdotus rakennettiin kaiken saatavilla olevan tiedon ja kohdeyrityksen tarpeiden pohjalta tekemällä analytiikkapalvelut yhtenäisemmiksi ja tarjoamalla työkaluja palveluiden arvon jatkuvaan kasvattamiseen.</p>	
Avainsanat	Verkkoanalytiikka, prosessin hallinta, verkkoanalytiikan roolit ja vastuut, innovaatio portfolio

Contents

List of Abbreviations

1	Introduction	1
1.1	Business Context and Challenge	1
1.2	Objective and Outcome	2
1.3	Thesis outline	2
2	Research Methods and Materials	3
2.1	Research Design	3
2.2	Project Plan and Schedule	4
2.3	Data Collection and Analysis	5
3	Current State Analysis of the Analytics Services and Process	9
3.1	Overview of the CSA	9
3.2	Background of the Analytics Services	10
3.3	Current Digital Analytics Maturity Model Scoring	12
3.4	Current Structure and Process	13
3.5	Current Analytics Services and Products	16
3.6	Findings from the CSA	17
3.6.1	Strengths	18
3.6.2	Challenges	18
3.7	Summary of the Key Findings from the Current State Analysis	19
4	Available Knowledge and Best Practices on Analytics Services	20
4.1	Web Analytics and process	20
4.1.1	Web Analytics	20
4.1.2	Data and Analytics	21
4.1.3	Process	22
4.1.4	Summary of The Web Analytics Process	25
4.2	Communication and Roles	26
4.2.1	Role and Responsibility Charting (RACI)	26
4.2.2	The Hub and Spoke	28
4.2.3	Communicating analytics	30
4.2.4	Analytics roadmap	31

4.3	Innovation based on data	32
4.3.1	Analytics business value	33
4.3.2	Innovation based on analytics	34
4.3.3	Innovation portfolio	37
4.4	Conceptual Framework	38
5	Building the Proposal for Redesigned Analytics Services and Process	39
5.1	Overview of the Proposal Building Stage	39
5.2	Key Findings for Building Proposal	40
5.2.1	Findings from the Current State Analysis	40
5.2.2	Findings from the Best Practices	42
5.2.3	Findings from the Workshop and Interviews	42
5.3	Proposal	43
5.3.1	Defined Analytics Process and Roles	43
5.3.2	Redesigned Analytics Services	46
5.3.3	Internal actions and becoming an analytics leader	47
6	Validation of the Proposal	48
6.1	Overview of the Validation Stage	48
6.2	Key Findings of Validation	48
6.3	Final Proposal	49
7	Summary and Conclusion	51
7.1	Executive Summary	51
7.2	Next Steps of the Proposal	53
7.3	Thesis Evaluation: Objective vs. Outcome	53
7.4	Final Words	54
	References	55
	Appendices	
	Appendix 1. Interview questions	
	Appendix 2. Word clouds based on interview answers	
	Appendix 3. Digital Analytics Maturity Model answers and results	
	Appendix 4. The Current RACI Table	
	Appendix 5. The Optimal RACI Table	
	Appendix 6. Services and Innovation Project Levels	
	Appendix 7. Defined analytics process and services	

List of Abbreviations

AI	Artificial Intelligent is a computer or machine-based intelligence, where the computer teaches itself to manage set tasks.
CAO	Chief Analytics Officer can be used as a job title for the senior manager who is responsible for the analytics services in the organisation.
CEO	Chief Executive Officer in charge of the management of the organisation and is seen as the leader of the company or corporation.
CSA	Current State Analysis reviews the current status of services and processes based on data findings.
CRM	Customer relation management is the management of current and potential customers.
KPI	Key performance indicator is business-critical measurement, which is checked frequently.
RFP	Request for Proposal is an announcement of a project posted by a business or organization for companies to bids to complete.
VPC	A Value Proposition Canvas can be used to analyse services. VPC visually examines how well services correspond to the values and needs of a customer.

1 Introduction

The value of data grows when people, services, and products are connected through the internet. To compete in the growing digital industry, collecting and analysing data becomes a vital part of companies' strategies. Web analytics is still an underrated part and its full potential is rarely used. Creating useful web analytics services needs to take into consideration many factors.

This study focuses on creating a proposal for web analytics service, and how to productize this service. The main challenge is to create a clear picture of the analytics services and responsibilities regarding web analytics processes. The introduction section presents the business context, challenge, objective, outcome, and thesis outline.

1.1 Business Context and Challenge

The case company is a software programming and consulting firm founded in the 20th century. The case company has over 100 employees working together to design, create, and implement web-based solutions in various areas of digital businesses and customer experience development. The employees work as consultants in customer teams or on a project basis.

The main business challenge revolves around **the lack of consistency regarding web analytics processes**. The analytics services are offered mainly based on customer requests, instead of actively selling web analytics services. Web analytics are part of the offered services from sales to reporting. Since many people representing different positions are part of the process, there is a clear need for unified ways of communicating, producing and reporting web analytics services. This raises a need for making responsibilities and actions clear throughout the whole process.

1.2 Objective and Outcome

This study focuses on mapping out the current web analytics process and creating a proposal for the responsibility assignment matrix and list of offered analytics services and services provided. **The objective of the study is to redesign the current analytics services and design an analytics process with roles and responsibilities.** The process is scalable based on the clients' needs and the new services match the clients' needs and pain points.

By simplifying the analytics offers, the company wishes to increase sales and customer satisfaction. Also, the company streamlined company policy will increase employee satisfaction and efficiency regarding web analytics processes.

1.3 Thesis outline

The study focuses on documenting and structuring a proposal for the analytics processes and responsibilities based on current situation, interviews and literature. The study is limited to the web analytics processes and does not comment on other processes.

Section one introduces the business challenge and desired outcome. Section two presents the used research methods and plans. Section three analyses the current status of the analytics processes and services. Section four introduces the best practices based on the literature review. Section five overviews the building of the proposal. Section six validates the proposal and results. Finally, section seven summarises the thesis and proposes the next steps.

2 Research Methods and Materials

This section introduces the research methods and materials used to conduct the study. The research materials are sectioned to research design, project plan and schedule, data collection and analysis of data.

2.1 Research Design

The study is conducted in five stages, as shown in Figure 1 below. Based on the research design data is collected and used to establish the desired outcome.

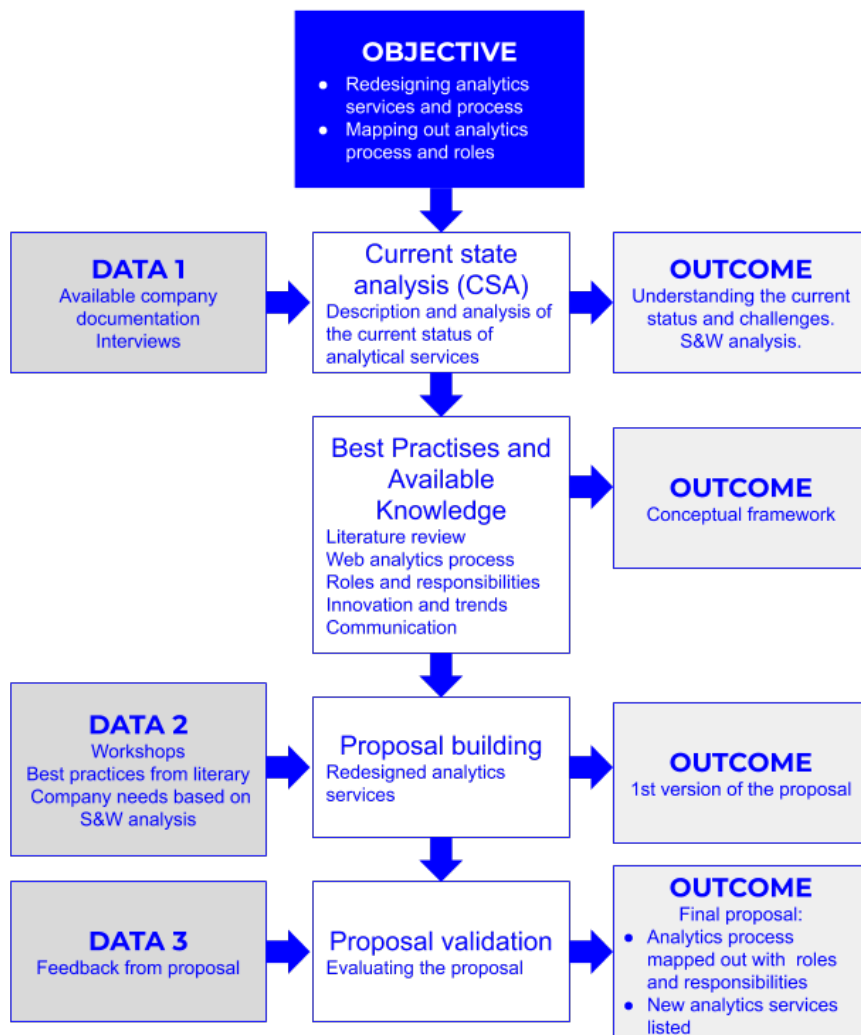


Figure 1. Research design

As seen in Figure 1, the study starts with the creation of the current state analysis of the web analytics processes and services based on the first data collection portion (Data 1). Data 1 is collected from interviews and documents provided by the case company about web analytics. Based on current state analysis created from Data 1, strengths and weaknesses are identified.

The best practices are built on existing knowledge to overcome the weaknesses and uplift the strengths to create the conceptual framework. The results are summarized in a conceptual framework. Based on the conceptual framework, Data 2 is collected by workshops and interviews, after this initial proposal is built and presented to the stakeholders. The stakeholders include management, sales, and marketing team. In the final part, Data 3 is collected based on stakeholders' feedback the proposal is evaluated. The final proposal, the web analytics process is mapped and presented with the proposed responsibilities, and the analytics services are mapped out.

2.2 Project Plan and Schedule

This project was carried out as a bachelor's thesis of a student graduating from Metropolia University of Applied Science. The project was conducted during summer and fall 2019 as planned. To ensure the quality and outcome of the project schedule was created as shown in Figure 2.

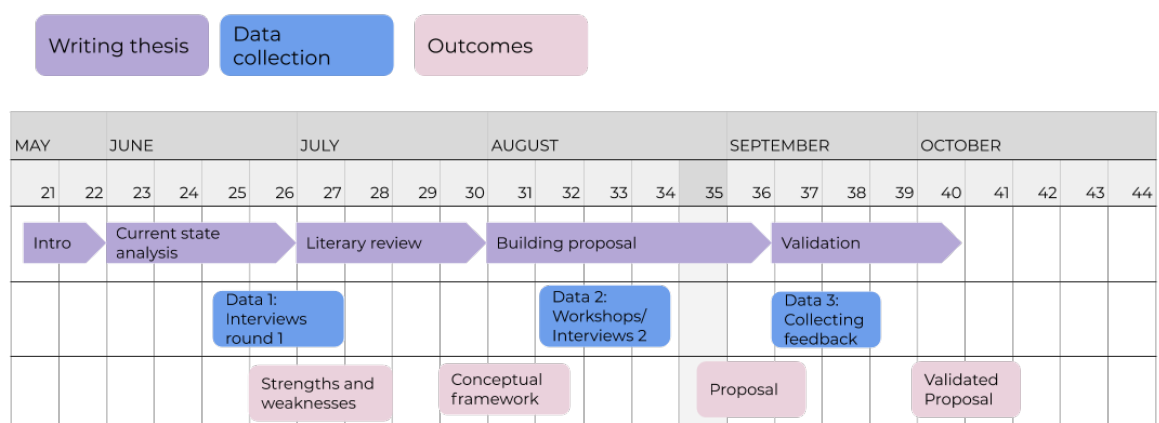


Figure 2. Project Schedule

During June, before the summer holidays, the current state analysis was started based on available knowledge and first interviews. Based on this information the interview questions are defined to ensure the direction of the project was aligned with the object. The outcome of the Data 1 and Current State Analysis (CSA) are strengths and weaknesses, which are used as bases for the literary review and building the conceptual framework.

The proposal was built based on Data 2, which includes the conceptual framework, workshop, and interview round two. Workshops are used to proposal building to ensure the success of the study and its relevance to all stakeholders. To collect the Data 3, the first draft of the proposal was presented for feedback. Based on the feedback, the final proposal was crafted and presented in the final presentation at the end of October.

2.3 Data Collection and Analysis

The data used for this thesis was collected from different data sources to ensure the reliability of the thesis. The data was collected in three parts during process. Data 1 includes the initial interviews presented in Table 1 in the next page.

Table 1. Details of the interviews in Data 1

	Participants	Data Type	Topic, Description	Date, length	Documented as
DATA 1, Current State Analysis (Section 3)					
1	Project Manager, Case company	Interview	Current State Interview	18.6.2019, 1h	Field notes
2	Content Designer, Case company	Interview	Current State Interview	19.6.2019, 1h	Field notes
3	Web Analyst, Case company	Interview	Current State Interview	19.6.2019, 1h	Field notes
4	Consult, Developer, Case company	Interview	Current State Interview	19.6.2019, 1h	Field notes
5	Business Development Director, Case company	Interview	Current State Interview	20.6.2019, 1h	Field notes
6	Lead Designer, Case company	Interview	Current State Interview	24.6.2019, 1h	Field notes
7	Project Manager, Case company	Interview	Current State Interview	25.6.2019, 1h	Field notes
8	Project Manager, Case company	Interview	Current State Interview	25.6.2016, 1h	Field notes
9	Senior Developer, Case company	Interview	Current State Interview	25.6.2016, 1h	Field notes
10	Developer, Case company	Interview	Current State Interview	26.6.2019, 1h	Field notes
11	Business Unit Director, Case company	Interview	Current State Interview	26.6.2019, 1h	Field notes
12	Business Unit Director, Case company	Interview	Current State Interview	27.6.2019, 1h	Field notes
13	Senior Designer, Case company	Interview	Current State Interview	27.6.2019, 1h	Field notes
14	Lead UX Designer, Case company	Interview	Current State Interview	28.6.2019, 1h	Field notes
15	Project Manager, Case company	Interview	Current State Interview	1.7.2019, 1h	Field notes
16	Strategy Director, Case company	Interview	Current State Interview	2.7.2019, 1h	Field notes
17	Project Manager, Case company	Interview	Current State Interview	2.7.2019, 1h	Field notes
18	Digital Analytics Maturity Model	Analysis	Online test	10.10.2019, 1h	Field notes

As seen in Table 1, Data 1 was collected through interviews of the employees from all competences to get the whole picture of the current situation of the Analytics services from all sides. Interviewed competences were analysts, developers, designers, sales, management, and project managers. Data 1 includes also Digital Analytics Maturity Model test introduced in section 3.3. Data 2 is explained in in Table 2 below.

Table 2. Details of workshops and interviews in Data 2

	Participants	Data Type	Topic, Description	Date, length	Documented as
Data 2, for Proposal building (Section 5)					
19	The Growth Hack Team, Case company	Workshop	RACI Workshop	16.10.2019, 2h	Field notes
20	Project Manager, Case company	Interview	Proposal interview	14.10.2019, 1h	Field notes
21	Designer, Case company	Interview	Proposal interview	25.10.2019, 1h	Field notes

As seen in Table 2, Data 2 was collected based on internal workshops. The workshops were used to collect feedback and ideas for the proposal. The feedback and ideas from these workshops were used to contact the first draft of the proposal in section 5. The initial proposal is validated in by Data 3 presented in the Table 3.

Table 3. Details of feedback gathering in Data 3

	Participants	Data Type	Topic, Description	Date, length	Documented as
Data 3, from Validation (Section 6)					
22	Management, Sales, and Marketing teams, Case company	Presentation	Proposal presentation	28.10.2019, 1h	Field notes
23	Web analyst, Case company	Interview	Proposal presentation & feedback session	30.10.2019, 1h	Field notes
24	Strategic Director, Case company	Interview	Proposal presentation and feedback session	31.10.2019, 1h	Field notes

As seen in Table 3, Data 3 was collected from the feedback of the initial proposal presented in the sales meeting. Sales meeting includes sales personnel, all business unit managers, CTO, and CEO of the company. Feedback was collected from two interviews with the case company web analyst and strategic director. Based on the feedback final proposal and next steps are proposed.

3 Current State Analysis of the Analytics Services and Process

This section reviews the current state of the web analytics services at the case company and presents the findings of the current state analysis. The current state analysis is based on interviews and the digital analytics maturity model. Based on these, a current process was mapped out and analysed, and current services and products are analysed against client needs and pain points. As a result of the analysis, strengths and weaknesses are recognised.

3.1 Overview of the CSA

The current state analysis was conducted in three stages. The first stage gathered information by interviews with individuals from all related competencies and departments. These interviews were conducted based on the pre-set interview question, found in Appendix 1. The information was gathered to get an overall picture of the current services and define current strengths, and weaknesses. The interview question included also questions about future wishes.

The second stage was to gather information about the organizational structure and how different organizational parties are connected to data and analytics services and processes. Data 1 was used as part of the research (Questions 5, 6, and 9, Appendix 1). Based on the research the current process chart was constructed.

In the last stage, all information was analysed to create a clear picture of the development needs and current strengths and hopes that need to be involved in the final proposal. In the analysis stage, relevant company documentation was used to illustrate the whole picture. This information was used to build the proposal in section 5.

All gathered information about the current status of analytics services and processes is discussed in the sections 3.2-3.5. The final sections 3.6 summarises the findings and presents the strengths and weaknesses of the current analytics services and process.

3.2 Background of the Analytics Services

The case company has offered analytics services as part of its offering for a long time. The analytics offering has evolved naturally over the years based on the trends in the digital service industry. Employees have built their expertise based on the individual interest and customer projects assigned to them. Part of the case company's strategy is to be an overall provider in the digital sector, and this makes the analytics setup part of the current offerings. Analytics is part of most projects at the case company and all employees have varying levels of knowledge on the topic. At the moment the case company has two dedicated analysts working in multiple client projects. Their tasks include consulting on client projects on analytics topics regarding analytical setup, development ideas, reporting, and added sales and offerings. The task varies based on the client project and in some projects either the developer, designer, or project manager is in charge of these tasks.

Most projects include basic tracking set up and reporting either through recurring meetings or by dashboards. Modifications and extra analysis are introduced mainly as an added service.

The interviews were conducted to gather a broad overview of the employee perspective. Interviewed employees were from all teams, and competence groups (management, tech, design, and analytics). The interviews were used to gather information about current services and processes, client requests, most beneficial services and tools, main factors, strengths, and weaknesses. The results were visualised to word clouds, similar to the one in Figure 3 below.



Figure 3. A word cloud of current analytics services based on interviews.

The rest of the word clouds can be found in Appendix 2. The word clouds highlight the most common words visually. The current services are heavily surrounded around technologies and tools, whereas the current process is more divided indicating that there is not a clear process in place. Based on the word clouds, the current services are reactive and very technical.

The analytical services are mainly offered based on client request. The request are mainly focused around the set up phase or basic tracking. Rarely the project team offers analytical input to the project. Clients request are mainly part of an on-going project through questions and based on new trends which are on top in the industry at the moment, such as a search engine optimization and growth hacking.

Most beneficial to employees' own work is the deeper knowledge of the services analytics provides. This knowledge can be used for additional sales and improvements to services. Current strengths can be summarized to be great in-house knowledge and technical skills, where teams help each other and respond quickly to requests and questions. Current weaknesses are not as unified or clear, the lack of clear process and time for

analytics and data work rises from the word cloud as seen in Appendix 2. Transparency and clear guidelines are needed. Employees would like to see development in analytics services, either by business analytics, more data related work or providing clear services to clients.

Based on the word clouds and interviews, current analytic processes need to be made more transparent and less reactive based on the client's request. More about the current status of the services is measured using the Digital Analytics Maturity Model in section 3.3, which gives insight into the current industry situation.

3.3 Current Digital Analytics Maturity Model Scoring

The Digital Analytics Maturity Model, known as DAMM, is a useful tool to assess the current situation of their or their client's level of maturity regarding the use of digital analytics. The model evaluates the maturity in five sections; Tools and technology, governance, objective and scope, teams and expertise, and process and mythology. These are benchmarked to the industry norm. As seen in Figure 4 below, there are five maturity levels.

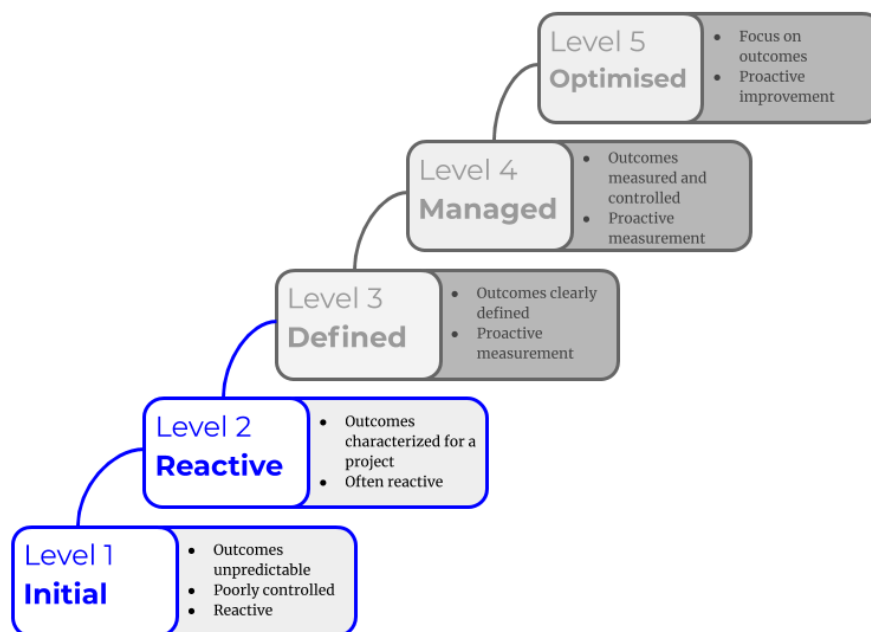


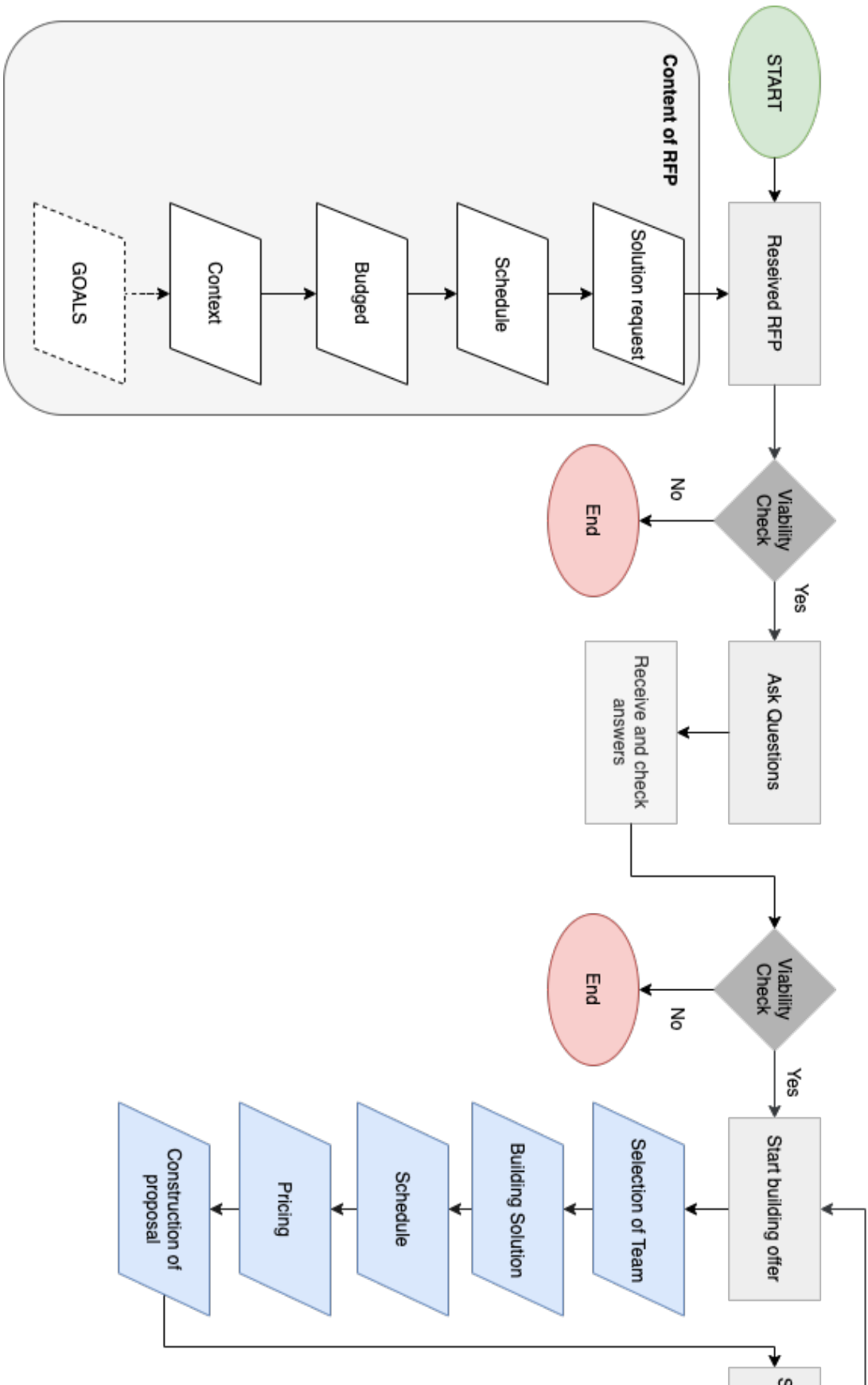
Figure 4. Digital Analytics Maturity Model levels, and current situation.

As seen in Figure 4, based on the scoring, the case company is currently on level 2 called Reactive. The test answers and in-depth results can be found in Appendix 3. On a reactive level, some processes are repeatable, but they are not organized, which makes it hard to see the value of analytics services. The results are in line with the interviews discussed in section 3.2.

Based on the results and interviews introduced in section 3.2, current analytic processes need to be made more transparent and services should be clearly stated, making them more accessible to all to utilize. The current process is investigated in the next section 3.4 more closely.

3.4 Current Structure and Process

Currently, the case company has two dedicated Web Analysts, and some developers, designers, and project managers who have analytical experience. The analytic process varies based on the project and client needs, but the process remains the same from the request for proposal to the definition of done. The current process is pictured in Figure 5 on the next page.



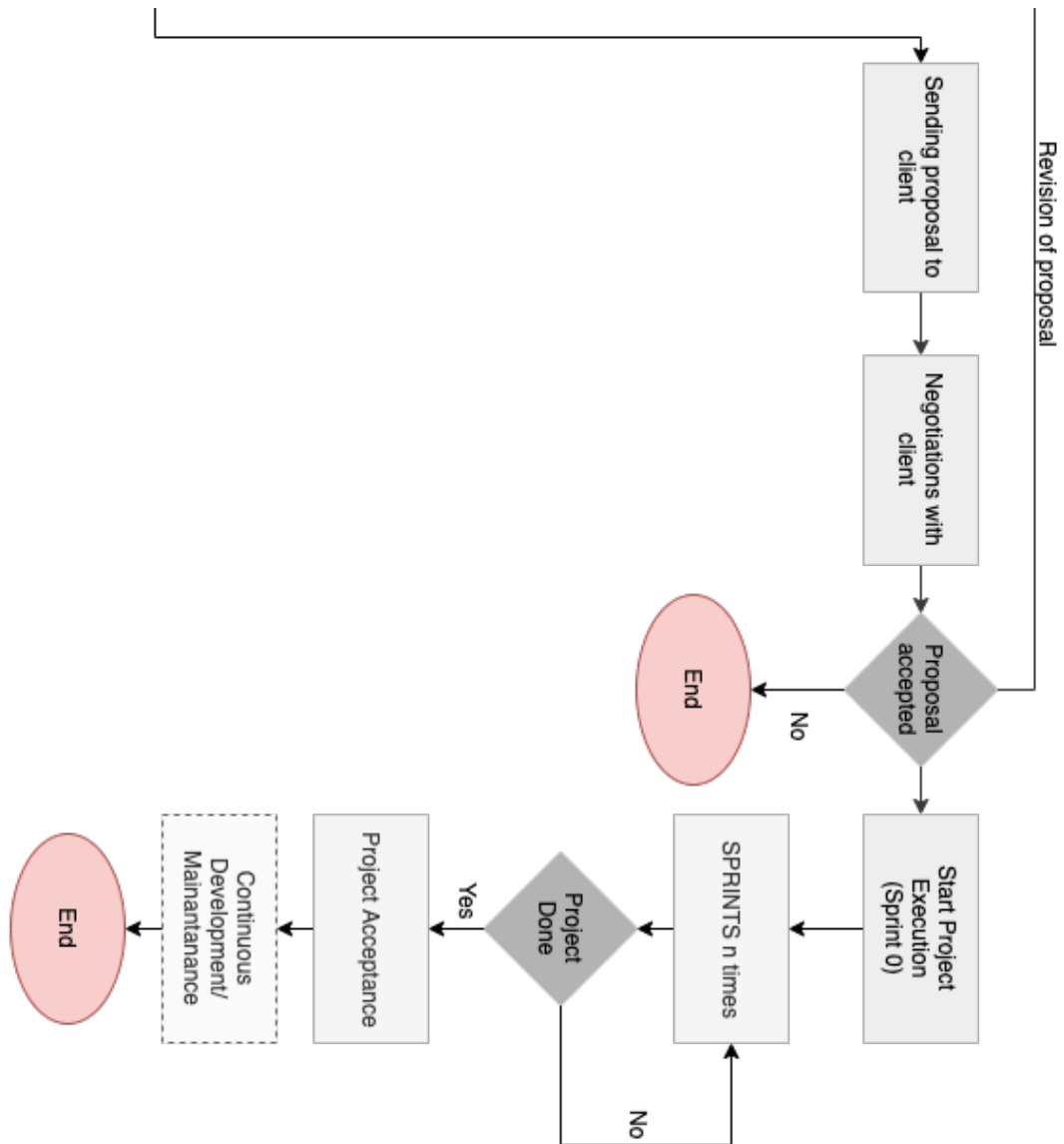


Figure 5. Current process chart

As seen in Figure 5, the current process can be described as a solution focus process. The process starts from the Request for Proposal (RFP), which usually includes the solution request, budget, schedule and some context about the business case, sometimes it includes some simple goals. In many cases, the RFP does not mention analytics at all, and the goals are explained only on the surface level. The RFP is validated if it is suitable for the case company's resources, and expertise. Based on the validation, questions are sent to the client or the RFP is discarded. If after the question round, RFP is deemed to be valid, a team is created to build an offer for the RFP.

Analyst is not part of the build team but is consulted for the data and analytics strategy. Currently analytics part depends on the project, but it is mainly added as an extra service to the proposal, as many proposals do not mention analytics at all. Due to this, analytics comes in mainly after the project has been finished in continuous development and is sold as an extra service.

After the proposal is accepted, the project is started with a customer. In some projects, sprint 0 is conducted. Based on the client interviews the first principles are set, which can be used early design hypotheses that people can relate to. Projects are usually conducted in sprints until the pre-set end goal is reached.

3.5 Current Analytics Services and Products

Current analytics services and products include data and analytics strategy, auditing, implementation, easy-to-understand dashboards, and business reporting, aggregation of data sources, growth hacking and conversion optimization, insights and recommendations for action, and training. A Value Proposition Canvas (VPC) was used to analyse the current services. VPC visually examines how well services correspond to the values and needs of a customer (B2B International). Current services together with gain creators and pain relievers were compared to the customer jobs, gains, and pains. The VPC was constructed in a workshop and the results are visualized in Figure 6.

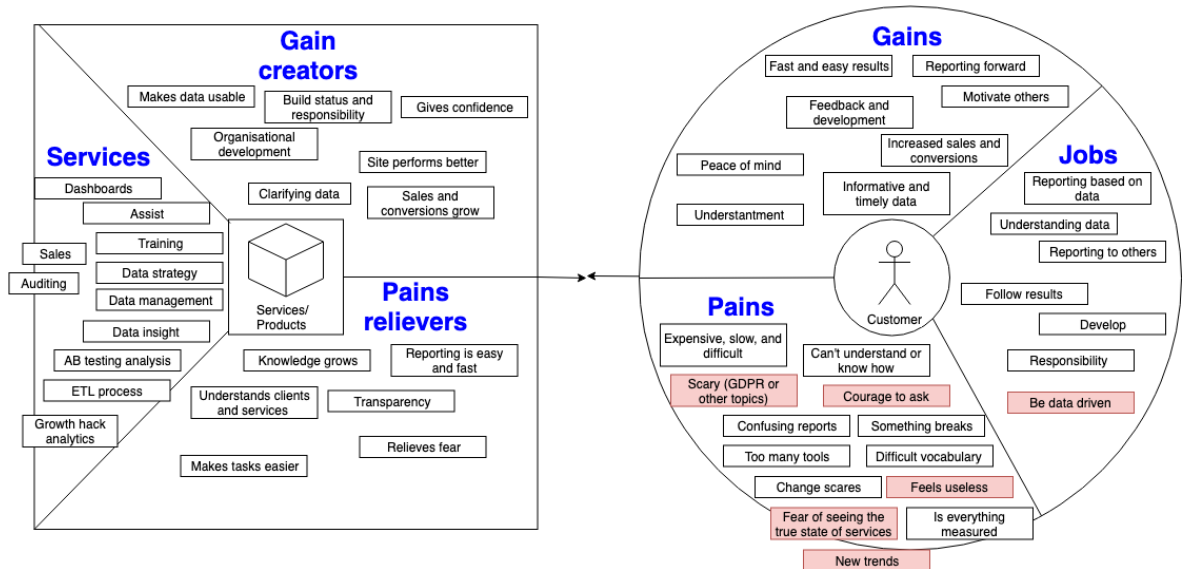


Figure 6. Customer value proposition canvas regarding current services.

In Figure 6, the customer needs and values, which do not match the services provided were colored in red to highlight the development needs. Most of the missing services are in the pains sector and are group around fear; scary GDPR, courage to talk, fear of seeing the trues state of own services, fear of new trends, feeling of uselessness, and how to be data-driven. Providing more support and confidence to the clients could have a positive effect on the current services.

3.6 Findings from the CSA

This section summarizes the key findings of the Current State Analysis. The CSA was conducted by interviews, Digital Analytics Maturity Model score and level, current process mapping, and analysing current services using value proposition canvas. Based on all of these, the strengths and weaknesses were discovered. The results are listed in Table 4.

Table 4. Current strengths and weaknesses

Strengths	Weaknesses
Wide range of offered analytic services	Missing clear process and consistency
Capable team and skilled employees	Lack of clear responsibilities and roles in operations
Quick responses and agile teams	Communication about the offered services Lack of innovation and new trends

The following sections discuss the strengths and weaknesses listed in Table 4. The strengths and weaknesses are used to create the proposal by enforcing the strengths and tackling the weaknesses.

3.6.1 Strengths

There is a wide range of analytics services offered internally and for customers. The employees have knowledge of analytical tools and services. There is good in-house knowledge of current services. The teams have quick response time to internal and client requests. The data and analytics teams are agile and able to react to changes quickly.

3.6.2 Challenges

The current analytics process is missing a process and clear guidelines. These make the process unclear and complicates internal and external communications. All projects use analytics in different matters and there can be big differences in how each project uses analytical services. Although the service catalog is wide and can respond to most client requests and pain points, these services are not used, and the services lack some

innovation. New industry tools are adapted slowly, and new services are introduced mostly by customer request.

3.7 Summary of the Key Findings from the Current State Analysis

The current weaknesses revolve around communication and lack of guidelines. Even though the current analytics process is missing clear processes and responsibilities, it is important to keep the guidelines loose to ensure that the analytics team is able to respond to changes and requests quickly and in an agile matter. Other weaknesses are around using the current services and utilizing new ideas and tools to the service pool. These and current services need to be communicated to clients and internally.

This study focuses on improving the offered analytical services by enforcing the current strengths and solving the current weaknesses based on the best practices and the literary review and best practices from the industry.

4 Available Knowledge and Best Practices on Analytics Services

This section introduces best practices based on the available knowledge of web analytics services and processes in the industry. The aim is to provide relevant information about the industry's best practices that can help to overcome the current challenges and enforce the strengths. This section looks into future trends and industry norms based on multiple different sources.

The available knowledge and best practices from the analytics industry are used to create the conceptual framework, which is used to build the initial proposal.

4.1 Web Analytics and process

Web analytics is evolving rapidly and there is more data available with the increased usage of digital services. Using the available best practices takes into consideration the quality, longevity, and scalability of web analytics. To understand the web analytics process, it is important to understand what belongs to web analytics and data analysis to build on a concrete plan.

4.1.1 Web Analytics

Web analytics can be described to be an analysis of digital services using a variety of data sources to create a vision of the digital services' overall state. Most commonly web analytics is used to create a generalized understanding of the users' experience on a specific platform. Web analytics is used to improve the overall quality of the digital service. (Peterson 2004, p:5-6)

Web analytics is not only looking at data from a web site, even though this is the most common source of data. Web analytics uses all available data sources from digital services, such as web site data, social media data, industry benchmark data, sales and marketing data, and customer relations data. (Peterson 2004, p:5-6)

Web analytics should always lead to meaningful actions, meaning measurement without thoughtful action is wasted. Implementing actionable measurements will lead to a continuous development cycle. The three main reasons projects fail are:

- The project goal is not defined
- The information collected is not shared within the organization
- No actions are taken based on the measurements.

The main goal of the continuous development process is to avoid these three obstacles and makes defining key performance indicators an important part of any project. (Peterson 2004, p:5-6)

4.1.2 Data and Analytics

Data itself is not valuable and it needs to be analysed or visualized to be utilized. Data is collected information from multiple sources, and analytics refers to methods used to utilize the data. Analytics can be anything from mathematics to algorithms, and visualized dashboards. Mapping out a clear data and analytic process gives guidelines and ensures the safe and effective use of data. Analytics is used to enrich the data to a valuable asset. (Markkula & Syväniemi 2015, p:72)

Enriching information means using analytics to get business-sensitive data that can be used to create development opportunities and to create an overview of the current status of measured services. Using data as part of the development process is a strategic decision. Analytics as a part of strategy can be used to create a competitive edge and used to find new development opportunities and pain points in current services. Nowadays there are ways to collect and acquired a lot of data, but the bigger problem is using it in ways that bring value to the user. (Markkula & Syväniemi 2015, p:72-74)

Only collecting and reporting data with simple lists is not enough, the numbers always need context to tell a story. Understanding the respective relations of different data points are used to realize concepts. Data itself does not speak and it always needs the right questions around it. Utilizing data effectively it needs guidelines and responsibilities in the analytics process. (Markkula & Syväniemi 2015, p:74-76)

4.1.3 Process

Web analytics are tools, which can be used to bring value to the user. But web analytics itself does not do this; it needs a process around it with an intent to create value. A web analytics process aims for continuous development of web services, creating a strict process does not allow room for agile work, but some guidelines are needed to make it transparent. Continuous web analytics process can be defined in five steps;

- Define
- Measure
- Prioritize and Change
- Verify
- Analyse

(Peterson 2004, p:12-14)

Define

Defining refers to establishing the key actions and hypothesis where to focus your efforts. With web analytics, you can measure a multitude of things, but without definition, it does not necessarily have value. Defining goals, in the beginning, guides the process towards desired results. Making the goals and hypotheses as clear as possible will provide the best results. (Peterson 2004, p:12-14)

The goals should align with the business goals and other parts of the business operations, such as design, marketing, and sales. The hypothesis should take into consideration how time and effort are spent and what kind of change is wished to obtain. (King et al. 2017)

A good and defined goal could be “Increase new visitor traffic by 20 percent from August to September by social media campaign to increase brand awareness.” This can be divided into sections;

[Goal] [Measurement] [Time period] [How] [Why]

Using defined goals will increase transparency and makes efforts focus on business-oriented targets. Defined goals can be easily measured and perfected based on the results. (Peterson 2004, p:12-14)

Measure

Measurement process should always start with taking a baseline value, to understand how the changes have affected the web service. Using the defined goals gives the measurement targets. One goal can have more than one measurement to ensure the real effect the change has had on a web service. Ideally, the measurement target is built to a key performance indicator, which is tracked over time. (Peterson 2004, p:12-14)

There are two types of KPIs, visionary KPIs, and tactical KPIs. The visionary KPI reflects on business relative goals at the company level and they are defined on the business management level. The tactical KPIs are defined in the service level and are more specific. (Jackson 2009, p:48-50)

The KPIs and measurement should be available as a regular report within the organization to ensure the transparency and that everyone is able to see the effects, they are making. This motivates and creates accountability in the process. (Peterson 2004, p:13)

Prioritize and Change

After defined goals are measured, there is a great chance that more than one of them is not reached. The results need to be analysed to find the possible reason the results were not met. Based on the analysis changes need to be prioritised. Usually, the smallest change can have the biggest effect on the results. This step takes time and should be done together with the team in charge of the web service. After the change is chosen it should be tested with a limited group of users while keeping all the other variables static. (Peterson 2004, p:13)

The problem and opportunities need to be defined. Way to do this is to specify, what are the biggest obstacles in the web service blocking the users to reach the goals. On the flip side, figuring out what the biggest opportunities in the process can give new inside

to the process. Based on the problems and opportunities, the hypothesis needs to be built. The hypothesis should answer which measurement it is affecting and how. A strong hypothesis can be divided into the following sections;

For [defined user group(s)], if [change] then [effect] because [rationale], which will impact [measure].

For example, for new users, if a discount is marketed on the landing page, sales will increase by 10 percent because it lowers the level to test our service, which will impact our new customer sales. Defining the hypothesis forces to think if the change makes sense, and how it will be measured. (King et al. 2017)

Verify

Before deploying the changes defined in the previous steps to the web service, these changes need to be verified. Verification should be done by a smaller audience that represents the user group(s) the change will affect in large later. One option is to use A/B testing, prototypes, and user research. The method should be selected based on the web service and the desired goal. (Peterson 2004, p:14)

Analyse

After the changes are tested and verified, the last step is to analyse. Analyses should be done against the predefined KPIs. The results should be available to everyone and maintained so that they can be utilized easily by the web service development teams and business managers. A good reporting ensures that the results are used in an effective matter and utilized in the future. The results of the analysis affect the business strategy and are used to redefine the goals, making web analytics a continuous development process. (Peterson 2004, p:14)

4.1.4 Summary of The Web Analytics Process

The web analytics process is a continuous development process, as seen in Figure 7.

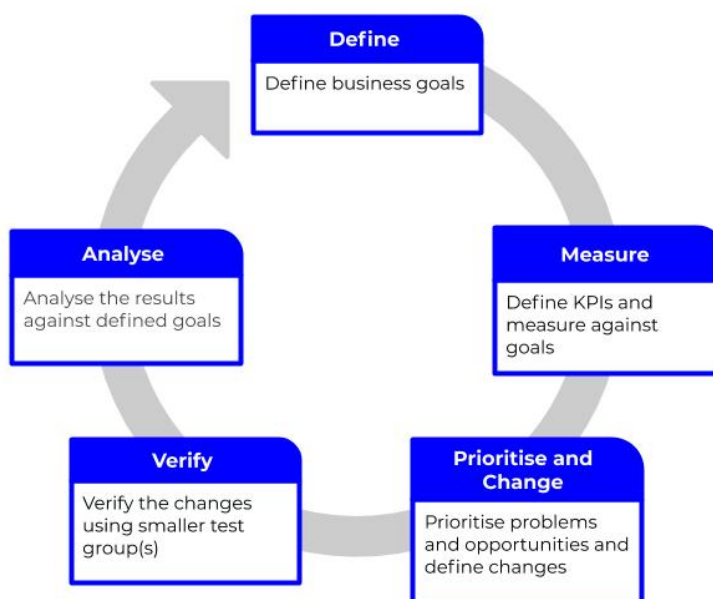


Figure 7. Web Analytics process (Peterson 2004, p:12-15)

The process starts by defining the goals. The goals are measured, and the results are shared openly. Results are used to priorities opportunities and problems in the web service, and changes are made based on these. The chances are verified by using different methods such as A/B testing before they are applied to the web service. The results are analysed based on the KPIs and the results of analysis affect the business strategy and goals, making the process start again by redefining the goals. The process can be quite time consuming to start, but after it is defined properly the first time, it can be quite agile process as the KPIs should stay the same during the iterations for a longer period of time, to see the how changes have affected the web service. (Peterson 2004, p:12-15)

The web analytics process should include everyone developing the web service and making the web analytics process part of the development cycle ensures the truth-based growth. (King et al. 2017)

4.2 Communication and Roles

The analytics process is used to bring the guidelines to the offered services, but another important question is who is responsible for the analytics process. Data and databases are usually owned by the IT department and the CTO to ensure the privacy and safety operations. The analytics process is much more than owning data. In some cases where the data is used only internally in small scale sales and marketing and manages the data analysis but using larger amounts of data, there is a need to select a dedicated person or team to this position. Utilizing data needs multiple skills and a diverse team would be the best option. Using data needs mathematical and technical skills, business knowledge, and human skills to understand the story behind the numbers. (Markkula & Syväniemi 2015, p:76-77)

4.2.1 Role and Responsibility Charting (RACI)

Role and Responsibility Charting, also known as the RACI matrix, is a method used to resolve roles and responsibilities in a cross-functional process. The word 'RACI' is an acronym that comes from words Responsible, Accountable, Consulted, and Informed. These roles can be defined as follows;

R – Responsible: Also, now as “The Doers” is an individual(s) who is responsible to complete the task. The results and degree of responsibility is determined by the Accountable.

A – Accountable: The accountable is in the end responsible for decisions, budget, and timeframe. The accountable has authority in the process. All actions can only have one “accountable” in the RACI matrix to avoid confusion and opposing concepts.

C – Consulted: The consult is consulted about the subject matter before making the final decisions. The consult can be for example the client representative. The communication needs to be open, two-way, and the consult's comments need to be taken into consideration in the outcome.

I – informed: The informed usually have tasks which are restricted by the results of the outcomes and thus need to be informed about the results and actions taken. This is a one-way communication, if the informed would affect the decision making, they should be marked as the consult (C).

(Smith, Erwin 2013)

The RACI matrix is built on top of a defined process in 5 steps;

Identify the work process. Main focus on high impact sections which are not changing rapidly.

Determine the activities and decisions of the RACI matrix. These steps should have meaning in the process while avoiding obvious steps, such as attend meetings. Steps should start with a verb.

Identify the list of roles or people involved in the process. Roles are better than names, as people may change. Also, the client can be listed as a role, but should not be too constricted as it can vary based on the client company. The chart should be valid even if all people would be changed in the process.

Fill in the RACI matrix roles. Filling the R's first is a good rule of thumb, followed by the A's, which should be only one per process step. Finally filling in the I's and C's. This can be a collective effort and the optimal amount is four to ten attendees.

Define the RACI matrix based on feedback. After the RACI matrix is filled in, all involved in the process need to review the matrix. Based on the feedback, it can be revised and updated.

(Smith, Erwin 2013)

4.2.2 The Hub and Spoke

The analytics hub is a combination of tools, processes, and people. As seen in Figure 8, the hub is used to share and gather knowledge from all different perspectives and from analytics tools to bring forward a comprehensive picture. (Jackson 2009, p:8-9)

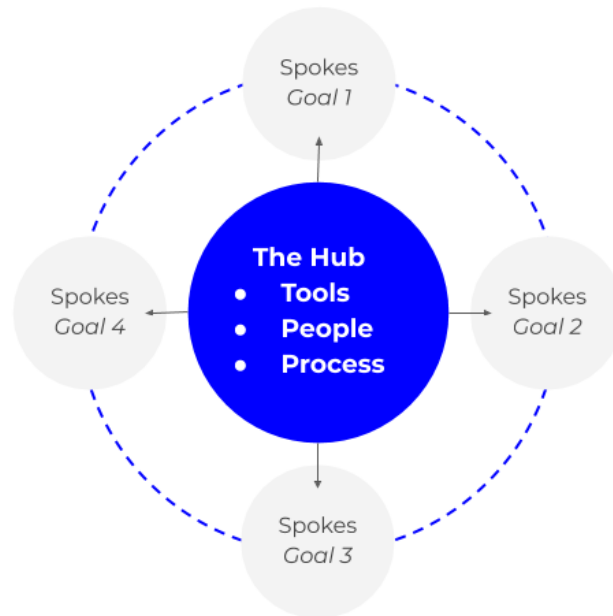


Figure 8. The hub and spokes model. (Jackson 2009, p:8-9)

The outside ring of the hub is the spoke, which consists of different business units. The basic principles of the hub and spokes are that the hub is the centralized communication channel instead of having multiple leaders from business organisations communicating only through their own channels. The spokes are representing these communication channels that come together in the hub, making the communication unified and clear. (Jackson 2009, p:8-9)

The spokes have different goals and objectives where they need data and analysis. The hub gives to the spokes channel to voice these needs and then provides processes and tools to acquire the needed knowledge. Regarding the organisation analytics, the hub should include people like senior analyst, technical specialist, business intelligence specialist, marketing analyst, and web analyst, whom all to report to the chief analytics officer

(CAO) who reports to the chief executive officer (CEO), and the steering group. (Jackson 2009, p:8-9)

Based on the company's size the hub is assembled. As seen in Figure 9, in smaller organizations, the hub should at least include analytics special, CMR manager, and technical specialist, who report the CAO. (Jackson 2009, p:8-9)



Figure 9. Small to medium business hub model (Jackson 2009, p:11-12)

The CAO aligns the gather information and provides input into organizational operations. The CAO should have knowledge of analytics, marketing, finance, and operations, to build a comprehensive picture, and in the optimal situation is reporting directly to the CEO and to the executive steering group. As this role combines the goals and needs of the spokes, this position requires great interpersonal skills and wide business knowledge. The CAO also needs politician skills to share the analytics knowledge to the CEO and the steering group the way it has an impact on the company's direction. (Jackson 2009, p:10)

The use of the hub is to guide the company in the right direction regarding their business. This starts by defining whether the vision and the web service are serving the same vision, this can be determined by a few key questions;

- How to spend on advertising in an increasingly competitive marketplace
- Whether the web service is helping the company answer the customer's questions
- The value of the web service to the business
- What is the customer value to the business?

(Jackson 2009, p:15-16)

The defined vision is used to build a strategy in the steering group level. The strategy should define how this vision is reached and which methods are used to reach this goal. The strategy should define the direction of each business unit, but each unit is still in charge of their own budgeting and actions. Business unit goals and KPIs should be defined based on the strategy. Once KPIs are defined for the spokes, it is their responsibility to try to achieve these goals. It is important that these spokes communicate their ideas to each other. (Jackson 2009, p:16)

4.2.3 Communicating analytics

The communication of different business units should focus on a bigger picture and rely on the vision. There are four factors that can be used to motivate and encourage all involved to be committed to the analytics process and changes it requires; making it personal, reminding of the external influence, implying urgency, and creating actionable plans. (Jackson 2009, p:17-18)

Making it personal makes people personally involved in the process. Motivation can be a bonus, promotion, fame or other factor that recognition to them when the results are achieved.

External influence can provide context on why the changes based on analytics are needed and valid. Competition benchmarking and marketplace analysis can give more information on how the competition is doing, and in which level the current services should be.

Urgency can be created by giving clear timeframes in which the results should be achieved. If the end goal is quite far away, it can be useful to agree with check-up points

with smaller goals. These timeframes should be paired with clear results to avoid confusion.

Actionable plans are one of the most important tools to create value from analytics. The actionable plans should be paired with the deadlines created by the urgency. The actionable plans should be clear and manageable. (Jackson 2009, p:18)

4.2.4 Analytics roadmap

Analytics roadmap can be used to create actionable steps that can be communicated easily to the whole organisation and brings value of analytics visible to everyone involved. The analytics roadmap includes 6 steps, as seen in Figure 10 below, and can be modified based on the company's analytics maturity level.

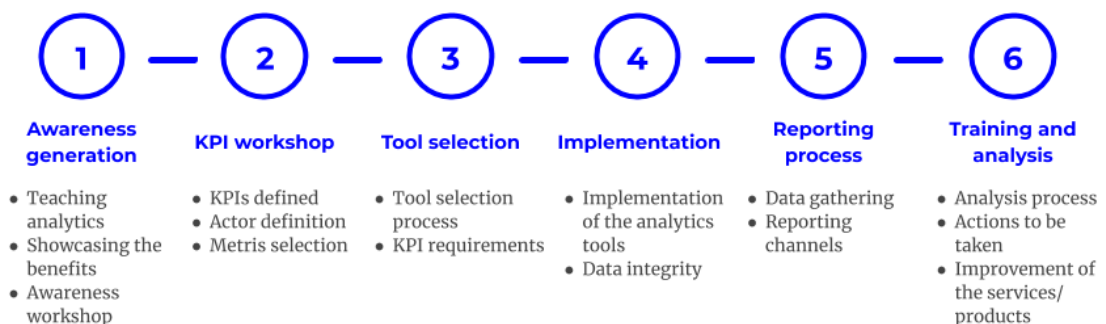


Figure 10. Analytics roadmap (Jackson 2009, p:19)

The first step of the analytics roadmap is to create awareness of the analytics and what are the benefits of adopting the analytics as part of the organisation's processes. It is important to show how analytics can be used to achieve wins in one's own line of work. One option is to use an awareness workshop, where the current knowledge level is surveyed and used as a basis for the workshop. If used together with the hub and spokes model, this step should involve both hub and spokes to ensure companywide awareness. The KPI workshop should be a different workshop, even though it can involve the same people. The objective of the KPI workshop is to define the main goals and create KPIs and metrics based on these. The KPIs should have four attributes;

- **Time period.** Defining what is the reporting timeframe.
- **Benchmark.** Defining the target level, and minimum/maximum level of the tracked variable.
- **Actor.** The person who is the one responsible for the follow-up actions.
- **Actions.** Deciding what are the actions taken based on the KPI.

(Jackson 2009, p:19, 50)

Tools should be selected based on the KPIs, making sure that everything can be tracked using these tools. The most common web analytics tracking tools is Google Analytics, which is free to use, and the tracked data can be modified using Google Tag Manager. Tool selection is made by the hub or management group based on the expert's recommendations. The tools should be implemented by the technical department based on the implementation plan, and data integrity is checked by the analytics specialist. (Jackson 2009, p:19)

Once tracking is implemented the data needs to be reported using the defined KPIs and metrics. The reporting can be done in manual reports, but an interactive dashboard is a more flexible solution. The analysis is made based on the reported data and it should affect the choices business units are making. Analysing results require training and understanding the KPIs and their effects on the business. This part requires the time and training of the spokes or the business unit managers. Making informed decisions will create wins and continuously improve the offered services and products when conducted correctly, making it important to train the decision-makers properly to use the reported data. (Jackson 2009, p:19-20)

4.3 Innovation based on data

The analytics process and communication enables people to use data and web analytics to their advantage, bringing business value. Section 4.3.1 showcases the value analytics can bring to the business, and section 4.3.2 introduces ways to use this data to innovate.

4.3.1 Analytics business value

To succeed in today's fast based and ever-evolving climate, businesses need to be ready for quick changes and keep up with the current and future trends. Analytics should be used to capture new trends and changes in the industry. Using analytics gives companies time to adapt to changes and use them to their advances. (Cisco, 2018)

Analytics leaders are companies investing in predictive analytics, AI and machine learning, whereas the analytics followers are focusing on business analytics and executive dashboards. The change between the followers and leaders in business growth is significant. The technologies alone do not bring the value, the data needs to be comprehensive, timely and accurate. As seen in Figure 11, analytics leaders have seen a significant impact of the analytics process on their competitive position. (Cisco 2018)

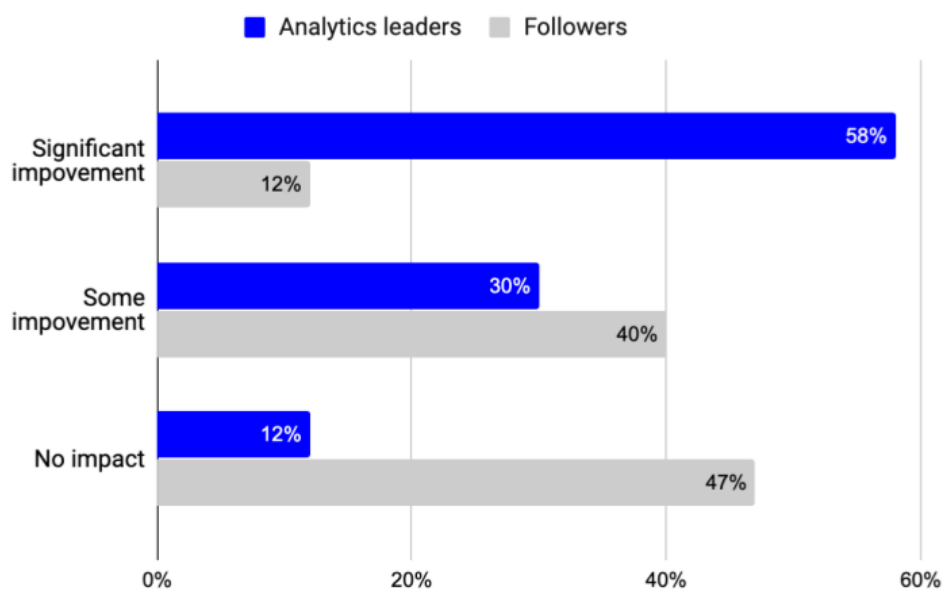


Figure 11. Impact of analytics in a competitive position (Cisco 2018)

Capturing value from data needs investments and changes in the technical and business operations levels. As seen in Figure 12 below, perfect insight value chain beginnings from collecting data and end in the business processes. (Mohr, Holger 2018)

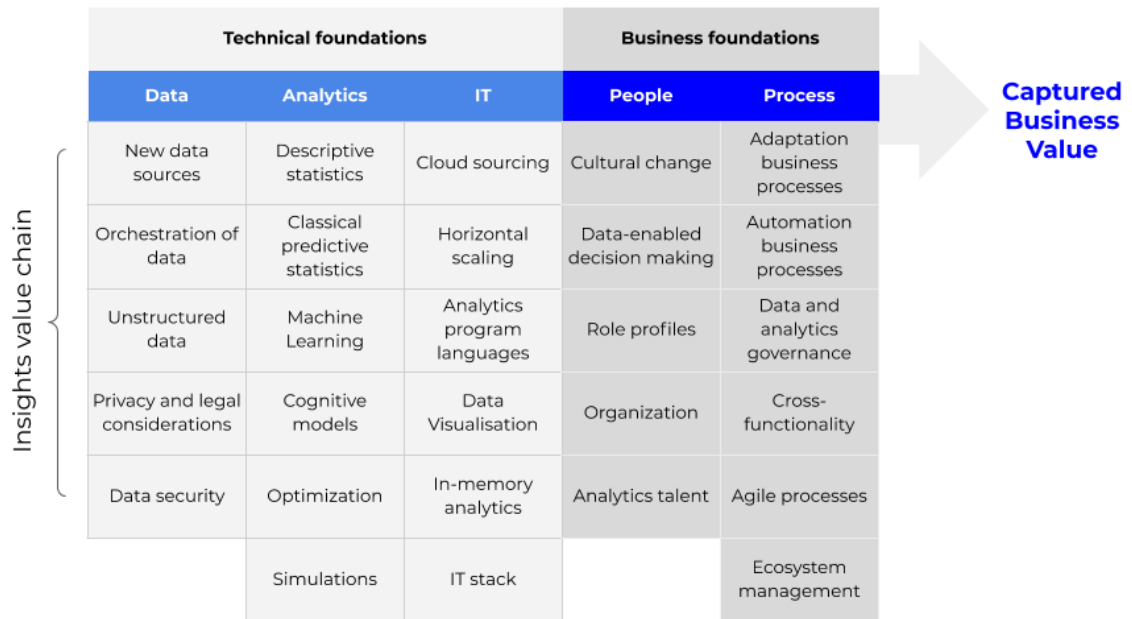


Figure 12. Insight value chain (Mohr, Holger 2018)

The value capturing begins with the collection and structuring of data and analysis. These operations need support from the IT department as collecting, storing and utilizing a large amount of support and technical power to be a smooth process. Technical support is not enough to bring value, the organisation needs to complement the analytics by cultural change and ensuring wide analytic talent and making analytics as part of the other business processes. (Mohr, Holger 2018)

4.3.2 Innovation based on analytics

Innovating based on analytics requires a lot of groundwork and the motion needs come from the top management level. To bring the innovative mindset together with analytics, the analytics leaders are focusing on six areas to create value from the analytics. The six areas are presented in Figure 13.

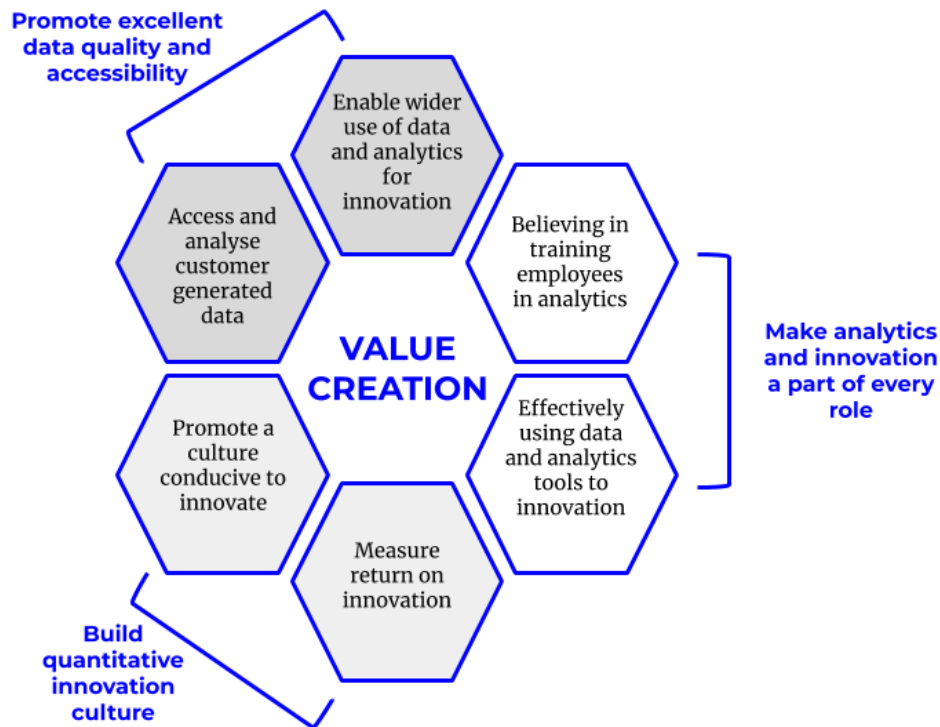


Figure 13. Value creation from combining analytics and innovation. (IBM, 2015)

As seen in Figure 13, the six areas can be divided into three main areas;

- Making analytics and innovation part of everyone's role
- Building measurable innovation culture
- Promoting data quality and open data sharing

(IBM, 2015)

The data and tools need to be available to everyone and the success is tied to clear processes and company culture. The companies which struggle with analytics do not have analytics processes and do not measure the results, or analytics is only restricted to one department. (IBM, 2015)

For the analytics leaders, analytics and data are available to everyone, ensuring that the data can be used whenever it is needed. The leaders invest in training their employees and favor collaborative tools and platforms. Sharing knowledge and results regularly is

also one key action points. The main point is to promote entrepreneurialism, where everyone has the tools and means to innovate using analytics. (IBM, 2015)

Measuring the results of innovative actions and the use of analytics ensures the effective use of resources and the effects of the actions. Investments in innovative analytics should have their own funds to see the effects and value of the efforts. Measuring should be linked to financial results to build progress based on failures and successes. The point is to keep up with the investments and only focus ones that show potential. Based on this the service portfolio is built and maintained. (IBM, 2015)

The main factor which the industry leaders have is that they recognise the value of analytics, user research, and innovation. To ensure the cultural change the data and knowledge need to easily available and accessed. When data and analytics are promoted to be used to innovate, the leaders report it conceiving new ideas. Part of the data accessibility is having quality data available for all parts of the organization. The data should include customer insight and customer-generated data and ensuring that the data is used for decision making. (IBM, 2015)

One option is using predictive analytics. Using predictive models can help the organization to serve its customers better. Predictive models are mainly built to match specific requirements, and due to this, the objective of the model needs to be defined. The definition can be built based on three points;

- Will the model improve the efficiency of the service?
- Will the model result in better decision making?
- Will the model enable new outcomes and enable new opportunities?

(Finlay 2014, p:22)

The main focus of innovative analytics is changing the organisational culture to praise data and making tools and knowledge available to all employees. The data should be trustworthy, and the results should be measurable. (IBM, 2015)

4.3.3 Innovation portfolio

The innovation portfolio provides support to the existing business and services. As seen in Figure 14 below, the innovation portfolio consists of four levels.

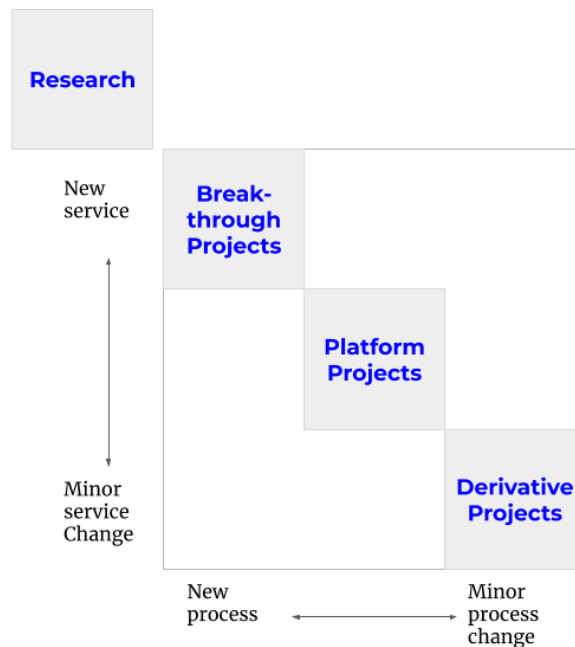


Figure 14. The innovation portfolio (Gemmel et al. 2013, p:367)

As seen in Figure 14, the four levels are research, breakthrough project, platform project, and derivative project. All these levels of innovation provide different kinds of support to the organization. The derivative project uses current services as a base and aims to improve current services in the short term. (Gemmel et al. 2013, p:366-340)

The platform projects aim to elevate the current services or processes while introducing new ideas. These project aims to create a difference in the marketplace and can be brought to the market in a relatively fast phase. The breakthrough projects aim to brought up completely new ideas and are used as a long-term strategic tool and require wide research. Projects should be selected for each category, where the level of research is increasing. (Gemmel et al. 2013, p:366-340)

4.4 Conceptual Framework

The conceptual framework is built around the best practices presented in Section 4, to be used together with the findings of the CSA to build the proposal described in Section 5. As seen in the Figure 15, the best practises are divided in four ares based on the outcomes of CSA.

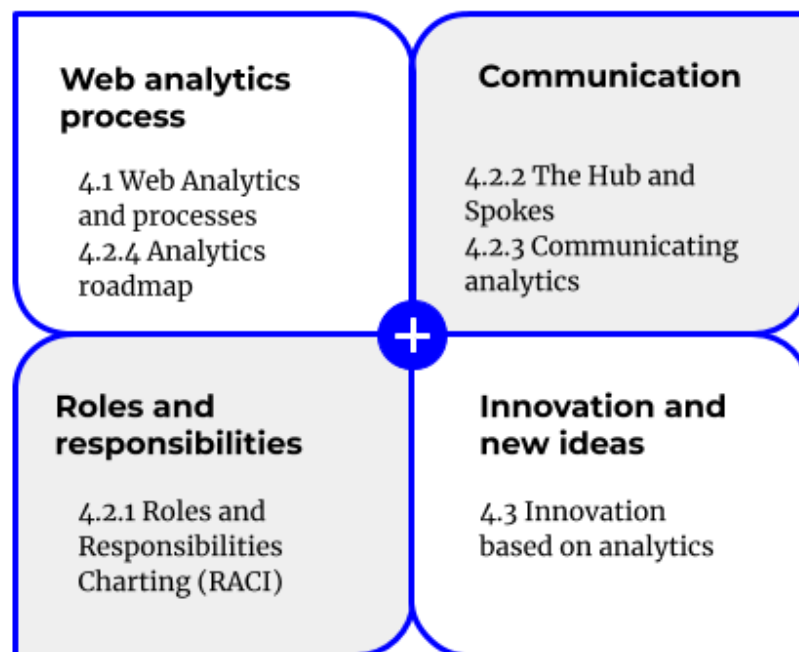


Figure 15. Conceptual framework

As seen in Figure 15, the proposal introduces recommendations to the web analytics process, communication, roles and responsibilities, and innovation. The conceptual framework created in this section is used together with the findings of the CSA to build an initial proposal for redesigning the web analytics services and defining the web analytics process. The next section presents the initial proposal and how it was built.

5 Building the Proposal for Redesigned Analytics Services and Process

This section describes the building of the initial proposal for the redesigned web analytics services and process. The proposal tackles three main areas; analytics process, redesigned services, and internal actions. The proposal is introduced by the proposal building steps, key findings from the current state analysis and a literature review on best practices, workshops, and pain points and needs in the case company, and finally, the proposal is drafted.

5.1 Overview of the Proposal Building Stage

This section introduces the proposal building process. The objective of this study was to redesign the analytics offering and map out the optimal analytics process. The building steps of the initial proposal are illustrated in Figure 16 below.

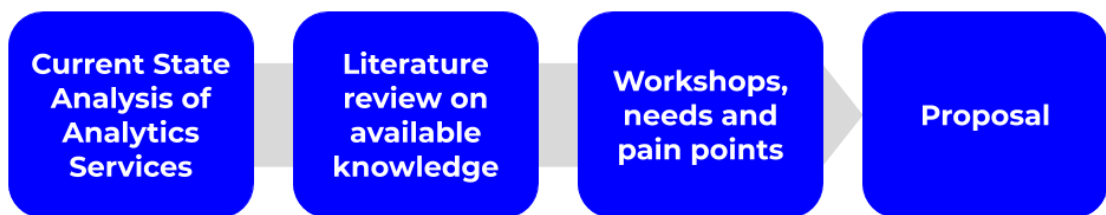


Figure 16. The logic behind the building of the proposal

As seen in Figure 16, the proposal was built in four steps. The first step was mapping out the current state of the analytics services in Data 1. Data 1 consists of 18 internal interviews, Digital Analytics Maturity Model score, current process map, value proposition analysis and other available knowledge, such as internal documentation and instructions. Data 1 was used to identify strengths and weaknesses. Based on the findings from Data 1, the literature review on best practices and available knowledge was conducted. Best practices were identified to create the conceptual framework, matching the best practices with the current weaknesses to solve them. Data 2 consists of workshops, which were based on the best practices. Data 2 included one RACI workshop and two internal interviews. The results of Data 2 are presented in section 5.2.

Based on all key findings, the first version of the proposal was built. The proposal was presented at the internal sales meeting to management, sales, and marketing teams.

5.2 Key Findings for Building Proposal

This section presents all key findings from the current state analysis, available knowledge, and company needs and pain points based on Data 2. Together these key findings works as a base for the initial proposal.

5.2.1 Findings from the Current State Analysis

The current state analysis was conducted by investigating the current analytics process and services. The analysis was made using internal interviews, and Digital Analytics Maturity Model results. The internal interviews included employees from all main teams and competences, such as management, sales, strategy, design, development, and analytics.

Data 1 is presented in Table 5 below showing the strengths and weaknesses in the current analytics services and process.

Table 5. Current state analysis results (Data 1)

Strengths	Weaknesses
Wide range of offered analytic services	Missing clear process and consistency
Capable team and skilled employees	Lack of clear responsibilities and roles in operations
Quick responses and agile teams	Communication about the offered services
	Lack of innovation and new trends

As seen in Table 5, the current strengths of the analytics services are the wide range of offered services, skilled team, and quick response time and agile team. The proposal is built to preserve these qualities. Based on the Data 1, the current weaknesses were missing a clear and consistent process, unclear roles and responsibilities, internal and external communication of the analytics services, and lack of innovation and evolution of the existing services. These results were discussed thoroughly in section 3.

The Digital Analytics Maturity Model score put the current analytics at a level 2 as seen in Figure 17 below.

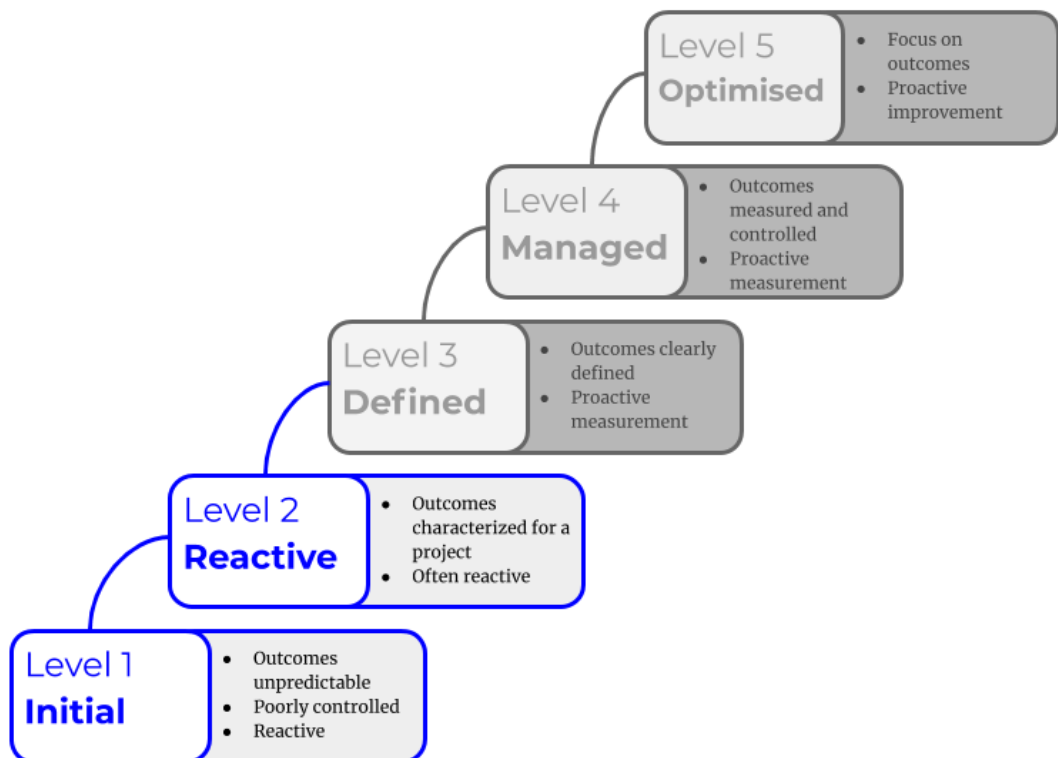


Figure 17. Digital Analytics Maturity Model results for the case company

As seen in Figure 17, the current analytics processes are often reactive, and outcomes are mainly based on isolated projects. The study aims to bring the analytics services between levels 3 and 4 and provides the tools to reach in a timely matter the level 5.

5.2.2 Findings from the Best Practices

Best practices from the industry were studied in Section 4. The topics were selected based on the weaknesses which were discovered in Data 1. The main topics researched were Web Analytics and process (Section 4.1), Communication and Roles (Section 4.2), and Innovation Based on Data (Section 4.3).

In Section 4.1.1 web analytics were defined to be based on data from digital services and the goal of web analytics is to improve the quality of the digital services. The analysing process of define, measure, prioritise, verify and analyse was introduced in the sections 4.1.3 and 4.1.4. The web analytics process should be a continuous process that developing digital services based on data.

Section 4.2 introduces the RACI model, the Hub and Spokes, and the analytics roadmap. The RACI model introduces the ideas about making the process balanced and creating clear role division. The hub and spokes model can be used for internal communication about analytics and how they affect the organisation's different departments. The hub model helps to unify the company goal and makes analytics decisions part of the strategy. Section 4.2.4 presents the optimal analytics roadmap, which can be modified based on the maturity of web analytics in the organisation. The analytics roadmap focuses on the importance of creating awareness and decisions based on desired goals.

Utilizing analytics for innovative thinking is examined in Section 4.3 called Innovation based on data. Based on the research analytics leaders see much more benefits using analytics services, making it crucial to develop analytics continuously. The value is created by ensuring that the technical and business foundations are obtained. To become an analytics leader three main areas should be developed; Making analytics part of all roles, measuring all actions and making decisions based on data, and promoting data quality and accessibility.

5.2.3 Findings from the Workshop and Interviews

In the proposal building stage, one workshop and two interviews were held. The first interview discussed the scope of the process and the needs of the case company for the

analytics process. Since the analytics process needs to conserve the strengths of the current analytics services, such as the agile and quick reactive times, the process should be made a framework that can be modified for each project but also includes enough structure to make it clear and repeatable.

The RACI workshop's objective was to map out the responsibilities and roles in the process. The workshop included a project manager, a designer, a developer, and an analyst. Current roles and responsibilities were mapped out in a RACI matrix and discussed with the workshop attendees which should be the optimal case. The optimal RACI table was conducted based on the feedback from the workshop and the literature review. The current RACI table can be found in Appendix 4. Based on the new process the accountability should be shared with the project manager and CAO. If CAO is not selected these should be moved to the business unit director.

The second interview discussed the flexibility of the process and the needs of the innovation regarding analytics. The innovative actions should be open to all and the analytics awareness should be available to the whole organization. The results should be shared and measured to ensure the optimisation of the resources.

5.3 Proposal

The proposal is divided into three main sections; Defined analytics process and roles, redesigned analytics services, and internal actions. The proposals are built based on the key findings from Section 5.2.

5.3.1 Defined Analytics Process and Roles

The analytics process is a combination of the analytics roadmap from Section 4.2.4 and the web analytics process from Section 4.1.3, as the framework needs to be flexible, but the bases of the web analytics process needs to have the main building blocks set in the beginning. As seen in Figure 18, the analytics roadmap is modified to have workshops as an optional addition as the framework needs to suit the client's needs as well.

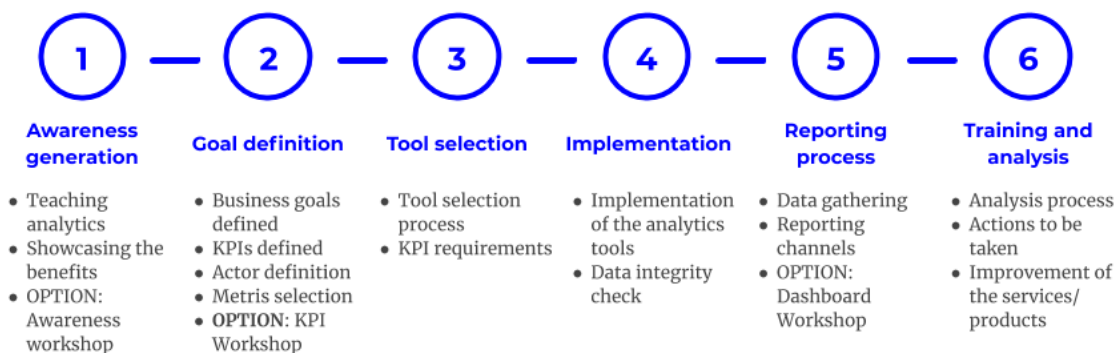


Figure 18. Modified analytics roadmap

Figure 18 should work as a base for new and existing projects. As best practices states, the analytics process needs to build a basis for the upcoming actions. Creating the awareness in-house helps the communication about the benefits of analytics which can be used to share these with the clients. Depending on the clients' data awareness, an awareness workshop can be arranged. As the main objective of web analytics is to improve the digital services, the goals should be defined and shared with the whole project team and used as premises for the process. If these are not preset, option KPI workshop can be used, where the analyst helps the client to set their goals, KPIs and main metrics. Based on the targets the analytics tools are selected and implemented. The reporting is based on the predefined goals and the results should be reported automatically to all reporting channels.

Part six of the process called training and analysis includes a part called the Analysis process. This process can be started when all previous steps are executed. The sixth step is a continuous analysis process based on the basic analytics process introduces in Section 4.1.3 as seen in Figure 19.



Figure 19. The sixth steps, training and analysis process

As seen in Figure 19, the training and analysing process assumes that all previous steps are set up. The goal is to use the guideline for the process. The process begins by setting up custom tracking, which is measured against the predefined KPIs and goals. Based on the baseline metrics problems and opportunities in the digital service are evaluated and prioritised. These changes are documented as a hypothesis. A good hypothesis should be divided to a sentence based on the following sections;

For [defined user group(s)], if [change] then [effect] because [rationale], which will impact [measure].

The hypotheses are tested and verified before wide release if needed, and results from the changes are analysed. The analysis of the results checks if the hypothesis was correct and if the new feature should be implemented to the digital service. The continuous analysis process starts again by setting up new possible tracking or features which are based on the previous iteration.

Analytics process requires talents from multiple competences, making the use of RACI table helpful. The optimal RACI table can be found in Appendix 5, which follows the analytics roadmap from steps one to five step by step and only gives overall guidelines to steps 6, training and analysis, as it highly depends on the digital service and should be defined case by case.

Appendix 5 presents that the RACI table includes a new role, the Chief Analytics Officer or CAO for short. The role of CAO is to bring into consideration the different needs inside the organisation. The CAO works together with the other business officers combining the business needs of all units and clients. The CAO is accountable for the quality of the services and data, which creates value for the clients and inside the client company.

5.3.2 Redesigned Analytics Services

The analytics services are currently unorganized and not documented. The innovation portfolio works as a base for the development of analytics services. The three levels are a breakthrough project, platform project, and derivative project. As seen in Figure 20 below, the level of research grows with the levels of innovation projects.

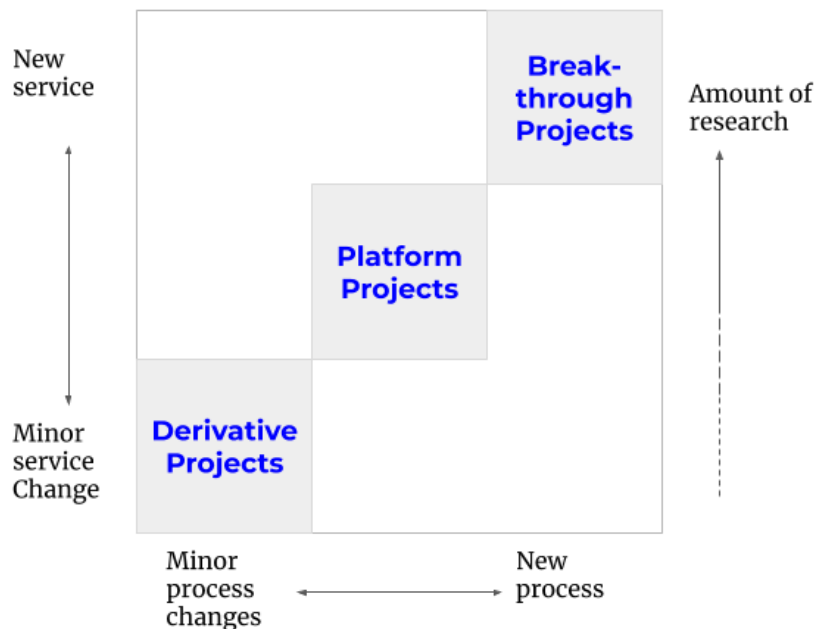


Figure 20. Modified innovation portfolio model

Using the innovation portfolio ensures short- and long-term development of the services, making the current services as good as possible and at the same time thrives to have long term strategic value. All services and project levels are listed in Appendix 6.

Derivative projects have short term effects on the current services as they aim to have minor changes to the services and processes. The case company has multiple current analytics services that should not be disregarded as they do serve clients' needs and pain points. Derivative projects listed in appendix 6, should be adapted to the new analytics process defined in Section 5.3.1.

Platform projects are used to differ from the competition in a mid-term timeframe. Platform projects introduce either new services or new ideas for the service catalog. Platform projects listed in Appendix 6. These services are new or include a new process.

Breakthrough projects bring new ideas to the service portfolio and are long term strategic projects. As there is a high possibility that these projects can fail and have a long time to come to market it is important to constantly measure the efforts and results of the breakthrough projects. Breakthrough projects are introduced in Appendix 6.

5.3.3 Internal actions and becoming an analytics leader

The web analytics can give insight to the digital service and it can be used as a tool for continuous development. Three main reasons why projects fail are:

- The project goal is not defined
- The information collected is not shared within the organization
- No actions are taken based on the measurements.

To avoid these pitfalls analytics skills should be made part of every role, data is collected and shared openly, and actions should be measured. Measuring results makes actions concrete and actionable and guides them in the right direction.

Web analytics is not only about technical development, but the organisation needs to adapt to the new roles and process making analytics part of the organization culture.

6 Validation of the Proposal

This section presents the results of the validation of the proposal introduced in Section 5. Firstly, the validation process is introduced, then the feedback is introduced, and finally, the final proposal is created in Section 6.3.

6.1 Overview of the Validation Stage

The proposal is validated to get insight from the case company and to validate the ideas presented in the initial proposal. The validation process is introduced in Figure 21 below.

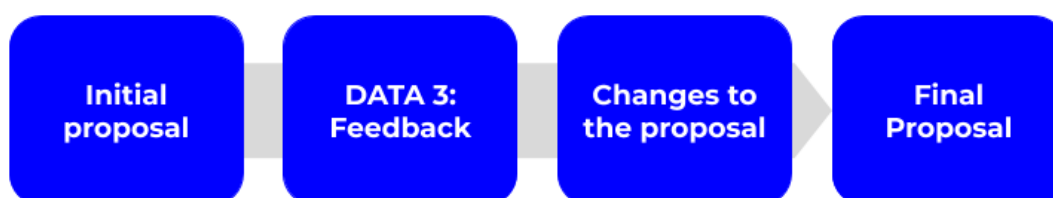


Figure 21. Proposal validation process

As seen in Figure 21, the validation process starts with the presentation of the initial process. Data 3 includes the feedback and comments from presentations, which are used as a base for the final proposal. The initial proposal was presented in the sales steering meeting and to the strategic director and the web analyst from the case company. The key findings from the feedback are presented in the next section and the final proposal is showcased in Section 6.3.

6.2 Key Findings of Validation

Data 3 was collected in three parts, first in a sales steering meeting where the sales, marketing, and unit management was present and then in an interview with the case company web analyst, and another interview with the case company strategic director.

In the sales steering meeting feedback was mainly positive. In the feedback, a couple of questions were raised. The main topic of concern was how this can be utilised in the project and consulting sides and what changes to the process should be made based on these two client types. A couple request were made to give confidence to the employees to use analytics in their day to day work through training or toolkits. The sales steering meeting felt that the ideas were good groundwork for creating analytics to be a part of every role and making the data more available for employees but needed more concrete ideas on how to succeed in this.

The case company web analyst provided the same kind of feedback but also commented on the innovation portfolio model. A couple of services should be categorised differently making them more consistent throughout the innovation portfolio.

The strategic director brought up some inconsistencies in the naming conventions in the analytics process. Making the naming unified would decrease the confusion and helps all employees talk about the tools with the same names, making the communication clear and unified. Another comment was about the pitfalls of web analytics, as not all web analytics projects and ideas work, how these pitfalls can be avoided or handled when encountered.

All these comments and feedback are used to build the final proposal introduced in the next section 6.3.

6.3 Final Proposal

The final proposal is built based on the initial proposal from section 5 and data 3 presented in section 6.3. The final proposal is introduced in three stages, namely done, ongoing and proposed, in Table 6 on the next page.

Table 6. Final proposal actions table

ACTIONS	RESPONSIBILITY	STATUS
Defined analytics process (1st version)	Thesis worker	DONE
Analytics innovation portfolio (1st version)	Thesis worker	DONE
Web analytics RACI table (1st version)	Thesis worker	DONE
Training of the employees	Thesis worker, the case company web analyst	ONGOING
Analytics toolkit	Thesis worker, the case company service managers	ONGOING
Testing the analytics process	Case company	PROPOSED
Creating accountability in the process	Thesis worker, the case company management team	PROPOSED
Role of the CAO	The case company management team	PROPOSED
Creating a continuous measurement process	The case company web analyst and service managers	PROPOSED
Research of new breakthrough projects	The case company service managers	PROPOSED

Table 6 showcases the status and responsibilities of each action regarding the final proposal. The new and defined analytics process, services in the innovation portfolio, and the web analytics RACI table are introduced in Appendix 7.

The following section presents the summary and conclusion of the study.

7 Summary and Conclusion

This section provides an overview of the study and presents the main conclusions. The next steps are introduced in this section and finally, the objective is compared to the results of the study.

7.1 Executive Summary

The study aimed to tackle a business challenge in the case company. The main challenge regarding the analytics services was the lack of consistency in the services and in the process. Accordingly, the objective of the study was to redesign the current analytics services and design an analytics process with roles and responsibilities.

The study was conducted in five steps, the first one was the definition of the business challenge, objective, and scope of the study. Based on the objective a current state analysis was carried out. The meaning of the current state analysis was to map the strengths and weaknesses of the current process and services. This was based on Data 1, which included 17 interviews, current process chart, Digital Analytics Maturity Model score, value proposition analysis and other available internal documentation provided by the case company. The results of the current state analysis are recapped in Figure 22.

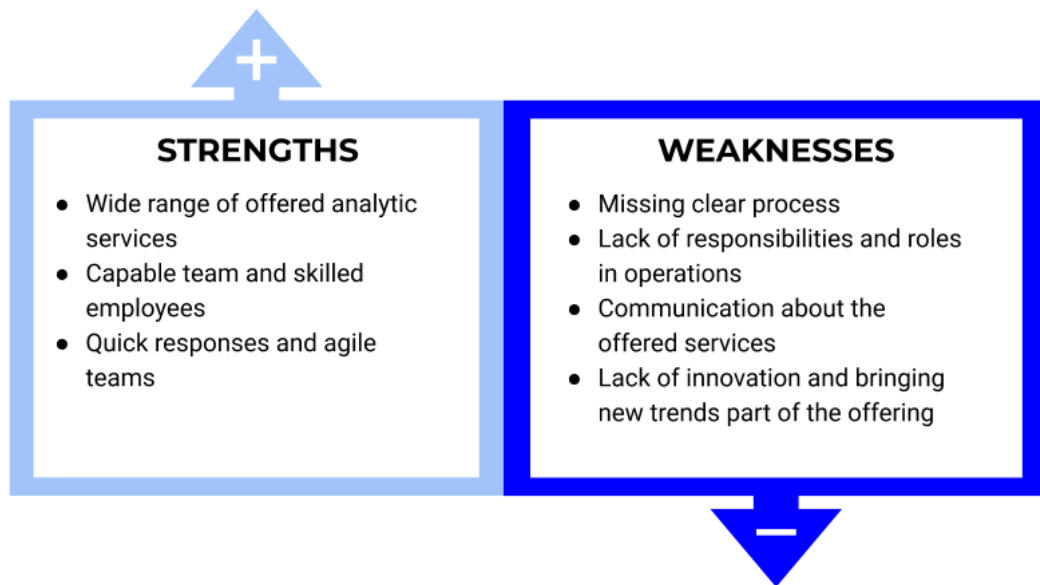


Figure 22. Results of the current state analysis

Based on identified weaknesses, a literature review was contacted. The literature review looked at the available knowledge and best practices from the web analytics industry. The topics included the web analytics process, communication regarding analytics, roles and responsibilities in the web analytics process, and innovation portfolio. From these, a conceptual framework was built to tackle the current weaknesses with corresponding theory.

Data 2 includes roles and responsibilities workshops with a project team responsible for data-heavy projects, one interview with an analyst regarding offered services and one interview with a designer regarding the web analytics process as part of a bigger process. Basis for interviews and workshop was conceptual framework. All interviewees were from the case company and work closely with web analytics or data. Data 2 focused on bringing the theory together with the case company's needs and pain points.

The first version of the proposal was built based on Data 1 and Data 2 and included current state analysis, defined analytics process, and the redesigned analytics services. The initial proposal was presented in the sales steering meeting to the sales, management, and marketing teams. Additionally, the proposal was presented to the case company analyst and strategic director. Data 3 was based on feedback and comments collected from the presentation.

Based on Data 3, the final proposal was formed. The analytics process included a framework that ensures the quality of the analytics services and provides structure and accountability regarding the roles who are part of the process. The offered services are built around an innovation portfolio which ensures the continuous development of the services in the future.

The final proposal is followed up with the next steps which are introduced in the next section 7.2. and the outcome of the thesis is compared to the initial objective in section 7.3.

7.2 Next Steps of the Proposal

The final proposal will be introduced to the case company and to the employees. The first steps are internal actions regarding the training of the employees regarding web analytics and data usage. The defined analytics process needs to be adapted as part of the current projects and analytics toolkit will be created to the consulting work.

At the same time, actions need to be measured and reported to keep track of the effects of the proposed changes. Based on the results there can be a need for more definitions in the process and services.

The offered services need to be introduced company-wide and the need of the chief analytics officer is high to create accountability in the analytics services. The added accountability increases the quality and business value of web analytics services.

7.3 Thesis Evaluation: Objective vs. Outcome

The objective of the study was **to redesign the current analytics services and design an analytics process**. The process was expected to be scalable framework to match clients' needs and pain points. Also, by simplifying the analytics services, the case company wished to increase sales and customer satisfaction while increasing the efficiency of the web analytics services.

The final proposal included the defined analytics process and services. The effects of the changes to take place need efforts and accountability in the web analytics to be taken into action. The internal measuring will help to follow up on the results of the ongoing actions. It is challenging to define the results before the new process has been tested and taken into action. But the efforts have been put into motion and the internal actions have been taken towards researching the objective and the proposal will have an important part in this.

7.4 Final Words

I am humbled by the opportunity to work with such an interesting and important topic for the case company. I would like to thank everyone who has been part of the project, especially the interviewees who made this possible and shared their knowledge. Working with this thesis has been a great learning opportunity and has given me a chance to deepen my knowledge regarding web analytics and service management, and to utilize these in practice.

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Appendix 1: Interview questions

Interview questions for the current state analysis

Topic: Current state of Analytic Services at the case company

Target: Management, project managers, designers, sales, analysts, developers

Questions:

Background information:

- How Data and Analytics is connected to you field (e.g. sales, design, dev, management)?
- Which analytics services we offer at the case company?
- Which kind of analytic request we get from clients?

Problem management

- How current analytics services were selected?
- How would you describe the current process with clients (focus on analytics services, step-by-step)?
- How and in which states we offer analytics services to clients?
- Which steps are the most beneficial to your own work?
- What are the main factors behind the current process and services?
- Who (roles) are part of this process and what are their responsibilities in the process?

Development needs

- Main strengths and weakness in current analytics services and process
- What kind of analytics services you would hope we would offer or focus in the future?
- Is there any documentation about analytics services?

Appendix 2: The word clouds based on the interviews

(Only for Case Company use)

Appendix 3: The Digital Analytics Maturity Model answers and results

(Only for Case Company use)

Appendix 4: The Current RACI Table

(Only for Case Company use)

Appendix 5: The Optimal RACI Table

(Only for Case Company use)

Appendix 6: Services and Innovation Project levels

(Only for Case Company use)

Appendix 7: Defined analytics process and services

(Only for Case Company use)