AALBORG UNIVERSITY
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How will Google Privacy Sandbox impact e-CRM of Danish SMEs?

A single case study with Freeway ApS

MSC INTERNATIONAL MARKETING
MASTER THESIS

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Executive summary

The goal of this master thesis is to determine how Google Privacy Sandbox will affect e-CRM of Danish SMEs in e-commerce. In the study of this, a literature review has been made. This aims to determine the topics of GDPR, e-CRM and Google Privacy Sandbox, as well as how they affect each other. From this, a priori framework has been made which has formed the basis for the analysis. In the preparation of the analysis, the effect of Google Privacy Sandbox on e-CRM in Danish SMEs has been studied. Next, it has been examined what this requires from Danish SMEs and finally how this corresponds to consumer expectations.

To examine these three areas, both qualitative and quantitative methods have been used. This is made possible by our scientific position as a critical realist. A semi-structured interview and four e-mail interviews have been conducted with competent people in the field, all of whom have given detailed answers according to their specializations. In addition, an online survey has been conducted, which is distributed through the social media platforms Facebook and Linkedin. Here, 64 respondents managed to answer.

Knowledge that we acquired through the literature review revealed various factors that could affect e-CRM in SMEs. For this particular master thesis, the focus is Google's innovation of GDPR, which culminates in Google Privacy Sandbox. The purpose of the project is to eliminate the use of third-party cookies and increase online privacy. It is currently an ongoing process where Google and various stakeholders are working on a solution that should be beneficial to everyone. This process often wonders where the consumer's data should be placed and who should manage it. A less affected topic is what impact it will have on SMEs using e-commerce. Therefore, in our single case study, we have examined, in the context of Freeway ApS, how it will affect e-CRM of Danish SMEs and the requirements to be ready for the elimination of third-party cookies. The results of this study indicate

that Danish SMEs must be ready to use and collect first-party data to a much greater extent than SMEs currently do. In addition, experts will be needed more than before to collect and utilize data, as marketing is back in a cleaner and less personal form. Furthermore, as Google Privacy Sandbox is developed, a solution must be found to power the FLoC with first-party data. Finally, the results suggests that companies will be more dependent on a data-responsible employee who is up to date with the laws of the EU that are often changed. The result of the survey show tendencies towards a acceptance of increased collection of first-party data by companies and potential walled gardens with benefit of improved online privacy.

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1 Introduction

In this section the reader will be introduced to the research background. This is the grounding breed for the problem formulation and related research questions. Lastly an outline of the project will be presented, which introduce the different parts of the project and their content.

1.1 Research background

The protection of personal data has been on the EU agenda since 1981, which has led to the introduction of the General Data Protection Regulation (GDPR) by the EU on 25th of May 2018. Until 2020, there has been a two-year grace period before regulations came into force, but it is coming to an end and the first fines have been issued (Villadsen, 2021). GDPR is made to ensure the individual's privacy, but it still faces resistance. Companies outside the EU that choose to operate within the EU also has to comply with the new regulations, and questions can be asked whether it reduces competitiveness globally (Tanaka, 2019). Another issue is privacy versus convenience. Menon (2019) points out that consumers using the Internet will have to consider their privacy more closely when browsing, as everything must be consented. Therefore, several web browsers have chosen to eliminate the use of third-party cookies. Safari did it as early as 2017 and Chrome want it eliminated by 2022. The two largest players on the market who respectively have 17 and 65 percent web browser market shares, eliminating the most widely used method in profiling, retargeting and traffic measurement (Martin, 2021). It will have an impact on all companies operating in e-commerce. At the same time, it also indicates that it could have an impact on companies' customer relationship management (CRM), as it will no longer be possible to track the individual to the same extent. A survey of Nordic companies shows that 76 percent are without a plan when third-party cookies disappear. Allan Olsen, Adform's Danish manager, believes these are disturbing figures that could have major consequences for the digital ad market ecosystem (Larsen, 2020). On the contrary, Bo Damgaard, CEO of OMD, believes that eliminating third-party cookies is not only a bad thing. It provides an opportunity to

reboot and ensure a greater focus on creating lasting relationships. Furthermore, he also believes that the placement of the ad as well as the creativity of the content will be crucial for brand differentiation in the post cookie world (Larsen, 2020). Google itself believes it has the solution to this marketing problem. They are in the process of innovating GDPR with their Google Privacy Sandbox, which they believe can be 95 percent just as effective per dollar invested compared to cookie-based advertising (Chromium, 2021). The mission is to "*Create a thriving web ecosystem that is respectful of users and private by default*" (Chromium, 2021). This is achieved according to Chetna Bindra, Google Senior Product Manager, by switching toward FLoC based cohorts. Google's own browser is intended to ensure the consumer's privacy and the desire of Google is that much of the data should be on the consumer's device going forward. It has faced resistance from both the CMA and AdTech industry, which are afraid of oligopoly conditions that only benefit the major platforms. The concern is that the big players are interested in reducing the flow of information across the web pages as long as they can continue to profile consumers across their own consumer services (Geradin et al., 2020; Schiff, 2020a; CMA, 2020). Despite Google's own statement about the effectiveness of Google Privacy Sandbox, this development will have an impact on CRM. Current large CRM systems proclaim that they already account for the new GDPR rules, but literature has shown that SMEs often simply use Internet technologies to facilitate the management of customer relationships (Lam et al., 2013). Few SMEs use complex software or strategies, but instead they often Internet technologies intuitively (Peltier et al., 2009; Street & Cameron, 2007; Zontanos & Anderson, 2004 Cited in Harrigan et al., 2012) At the same time, the literature in this area gives an indication that internet-based technologies are necessary to make successful relationship marketing (Ab Hamid & Kassim, 2004; Chen & Ching, 2007; Zineldin, 2000 cited in Harrigan et al., 2012). In SMEs, these are often websites, e-mails, and databases to build on top of traditional CRM activities (Dibrell, Davis, & Craig,

2008; Harrigan, Ramsey, & Ibbotson, 2008; Simmons, Armstrong, & Durkin, 2008 cited in Harrigan et al., 2012).

1.2 Problem formulation

This Master Thesis is built around Google Privacy Sandbox's impact on e-CRM in Danish SMEs. This topic has been found interesting as GDPR and the cookie legislation from the EU has meant that Google has felt composed to innovate Google Privacy Sandbox. The development of Google Privacy Sandbox leads to the elimination of third-party cookies, which until now has been the most widely used method in profiling, retargeting and traffic measurement (Martin, 2021). At the same time, a survey from Dynata shows that 76 percent of Nordic companies are not prepared for the elimination of third-party cookies. In addition, the literature shows that SMEs often do not use complex CRM systems, but instead use the internet-based technologies that are available. This is defined as e-CRM. This has led us to the problem formulation presented below.

Problem formulation

How will Google Privacy Sandbox impact e-CRM of Danish SMEs in e-commerce?

1.2.1 Research question 1

How can a digital innovation of an online big MNE, such as Google Privacy Sandbox, affect e-CRM of Danish SMEs in e-commerce?

The purpose of the first research question is to understand the effects of the implementation of Google Privacy Sandbox on e-CRM. The extent of these effects and the dimensions in which these effects will manifest themselves, and how this innovation which will be pushed through the own Google platform of a market dominant MNE will affect SMEs in e-commerce.

1.2.2 Research question 2

What will the innovation of Google Privacy Sandbox require from Danish SMEs in e-commerce?

In this research question we would like to examine what the changes this innovation in the e-commerce may require from the Danish SMEs. This will be the in terms of decision making for e-CRM, its organisation, implementation, interaction with customers, technical and management processes.

1.2.3 Research question 3

Are such innovations led changes in e-CRM in Danish SMEs aligned with customer expectations in user privacy?

In this research question the readiness checklist, which have been developed upon the findings in research question 2, will be presented. Secondly, the key findings from the survey will be analysed in relation to the readiness checklist. Lastly a partial conclusion will summarize the results.

1.3 Thesis outline

This section will give the reader an overview of the different sections that the thesis contains. This is done to achieve a common thread as well as better understanding of the individual sections of the thesis. The first section deals with the introduction of the thesis. This includes research background, problem formulation, thesis outline and key definitions.

Next, our thematic literature review will be presented. In this review, GDPR, e-CRM and Google Privacy sandbox are covered from relevant literature. The purpose is to gain knowledge about these topics to best investigate the relationship between them and further demonstrate how they influence the answer of our problem formulation. This is visualized in the priori framework which is presented in the third section on page 42.

The fourth section will deal with methodology. This includes our scientific position as well as our choice of method collecting data for the analysis. It includes the method behind the semi structured

interviews, e-mail interviews and the survey. This is done to increase the transparency of the thesis so that the reader should not be left with methodical questions.

In the fifth section, the reader will be presented with the analysis for the answer to the problem formulation. The analysis is broken down into three research questions. First, there will be an investigation into which effect Google Privacy Sandbox has on e-CRM in Danish SMEs in e-commerce. This will subsequently lead to research question 2 which deals with what Google's innovation of GDPR requires of Danish SMEs in e-commerce. Both analyses will be processed based on interviews with people working in the field. Finally, a study of consumer expectations will be presented. This will be based on previous analyses, on which a survey will be formed. This will form the basis for a subsequent discussion.

Finally, the reader will be presented with the conclusion, limitations and directions for future research and implications. The reader will thus be presented with the conclusion we have been able to draw from our data, as well as the challenges we have encountered during the process and finally the implications the study could have for future research.

1.4 Definitions

This section seeks to create a common understanding of the most important concepts used in this master thesis. This reduces the risk of misunderstandings between reader and researcher.

1.4.1 e-CRM

The use of internet technologies to facilitate the management of customer relationships (Chaston and Mangles, 2003 cited in Lam et al., 2013).

1.4.2 Google Privacy Sandbox

Googles proposal to eliminate tracking of the individual while still being able to allow ad targeting.

1.4.3 Cookies

A file created by a website and stored on the user's computer. The cookies make the user recognizable to the website and simultaneously keeps track of your preferences.

1.4.4 First-party cookies

First-party cookies are created when the user enters a website. It is used to track the user's preferences on the website and helps to create a good customer experience.

1.4.5 Third-party cookies

Third-party cookies are cookies created by others than the website the user are visiting. This enables third-party to track the users across multiple websites.

1.4.6 First-party data

Data collected directly from the user.

1.4.7 Third-party data

Data collected by a third part who doesn't have any relation to the user, which the data is collect upon.

1.4.8 Walled-Gardens

A closed ecosystem which alle operations go through. All data and technology it kept within the walled garden.

2 Literature review

This section examines the literature on GDPR, e-CRM in SMEs and Google Privacy Sandbox. The purpose of this literature review is to make an overview of how these topics depend on each other. First, the reader will be presented to the development of the Personal Data Regulation in recent years as well as some of the implications it has encountered. This is followed by a review on the use of e-CRM in SMEs to understand how they are working with this in practice. Last, a review of the literature is presented on the Google Privacy Sandbox project. This is a new project that deals with the eliminating of third-party cookies which is still not fully developed. These topics will subsequently be conceptualized into a priori framework that forms the outline for the analysis of this master thesis.

2.1 GDPR

In 1981, a treaty was made to protect individuals' data in automated systems. It was signed and entered into force in 1985. Ten years later, the first European Data Protection Directive was created with the aim of protecting the processing and transport of personal data (Menon, 2019). The definition of personal data was defined as

> *"Any information relating to an identified or identifiable natural person ("data subject"); an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity"*
>
> (art. 2 a DPD, 1995 Cited in Boban, 2016)

That same year, privacy and personal data was codified in human rights law (Menon, 2019)**.** At the end of 1998, EU Member States were obliged to implement the law through national legislation. In 2009, the EU discussed the influence of newer technologies as well as globalization in using and defending personal information and data exchange between governments, industries, and other entities. At the end of 2009, the report "Future of Privacy" was published by the European Commission and proposed a modernization of the framework set up to protect existing personal data (Menon, 2019). Based on further study in all policy areas, the European Commission adopted a proposal on an approach to the protection of personal data in EU countries, which led to an amendment to the Data Protection Directive of 1995. In the same year, an Association for Data Protection and Data Security announced that the European Commission would implement a regulation on the harmonization of legislation on the protection of personal data in the EU (Menon, 2019).

Following the revision of the 1995 Data Protection Directive, a proposal for the General Data Protection Regulation (GDPR) was recommended in 2012 to strengthen online privacy (Boban, 2016., Menon, 2019). A few changes were made in response to US attempts to protect US companies operating in the EU. Subsequent months followed with debates and discussions that ended with a recognition of a need for "*a uniform and modern data protection law for the EU to ensure confidence and growth in the Digital Single Market* (Menon, 2019). The regulation would provide three major objectives to ensure this (Boban, 2016).

- The harmonization of 27 national data protection regulations into one unified regulation.
- The improvement of corporate data transfer rules outside the European Union.
- The improvement of user control over personal identifying data.

During the same year, other revisions of the GDPR proposal were adopted. This included increased sanitation, profiling limits, data transfers from third countries, etc. In 2014, the European Parliament

with an over-elected majority supported the GDPR (Menon, 2019). The next two years went with discussions among regulators at macro level, with a view to develop the final version. The United States warned in 2015 that the GDPR and the complication of data sharing could make tracking terrorist attacks difficult. At the same time, a common version of the regulation was adopted, which was approved by LIBE, the European Parliament and the European Commission, among others. The final version included, among other things, consent for the individual's data to be stored, the right to know if personal data had been violated, plain language policies and penalties up to 4 percent of the company's annual revenue (Menon, 2019).

In 2016, the plan for the implementation of the GDPR was develop and published. In the same year, the regulation was active twenty days after its publication in the Official Journal of the European Union (Menon, 2019). In 2017, the European Commission proposed two new privacy and electronic communications regulations, as well as data protection rules for EU institutions. They were in line with the provisions of the GDPR. In 2018, the GDPR came into force on May 25th. The GDPR replaced the 1995 Data Protection Directive in 2016, with the aim of synchronizing data protection laws across Europe, protecting and empowering citizens and reshaping how organizations approached the concept of data protection (EUGDPR cited in Menon, 2019). GDPR is the most significant influence on data protection in decades and consumer searches for GDPR have increased dramatically in recent years (The Economist, 2018). Until 2020, there was a two-year grace period, after which regulations apply throughout the EU. The level of fines is different; however, the maximum fine includes up to 20 million euros or 4 percent of global revenue, whichever is higher. This does not include individual claims for damages. The rules apply to all processing of EU citizens' personal data, regardless of where the processing of data takes place or where the business is located (Menon, 2019). There is no distinction between paid and unpaid transactions, the use of different technologies, etc. In other words, it is everyone with information about the citizens of the countries who will be affected

(Menon, 2019). To implement the regulation, conditions for citizen consent have been tightened. It is no longer possible for companies to hide behind complicated "terms and conditions", and companies are required to clearly define them in informal language. In addition, they must allow citizens to withdraw their consent (Menon, 2019).

The first charges of the new GDPR regulations in Denmark ended in a lawsuit to the furniture company Ilva. The company had illegally stored data on 350.000 different consumers in the fall of 2018. The 12th of February 2021, the lawsuit ended in a fine of 100.000 DKK equivalent to 13.450 euro. This has afterwards been appealed by the prosecutor whom initially sued Ilva for 1,5 million DKK (Villadsen, 2021). This case is being monitored very carefully in Denmark by companies, due to it being the first lawsuit in Denmark with the new GDPR regulations and will therefore set precedent for future cases.

2.1.1 Possible implications of the GDPR.

With the historical timeline stated above, this section will seek to give the reader an understanding on possible implications and effects of the GDPR regulation for those involved, since the GDPR regulations have been exposed to some criticism (Cvik et al., 2018).

2.1.1.1 The economic effects of implementing GDPR regulations.

One of the implications of the GDPR regulations is the economic effects for the companies within the EU. A general concern is the economic effects of the initial implementation of the GDPR and ongoing expenses as a result (Cvik et al., 2018). The regulations are comprehensive and have been deemed by researchers to be the biggest threat to business continuity for a decade (Kolah et al., 2015). Because the regulations are comprehensive, a Data Protections Officer (DPO) is mandatory for relevant companies in the EU (Art 37 GDPR). The DPO role is to be the in-house regulator that the company in project-by-project basis comply with GDPR regulations for the EU customers (Kolah et

al., 2015). This includes five specific task ranked A-E in article 39 of the GDPR regulations whereas D is *"DPO need to cooperate with the supervisory authority"* (Art 39 GDPR).

A rough estimate has been made that the preparation and compliance would cost about 7,8 billion USD (Bloomberg Businessweek 2018 cited in, Menon, 2019). The cost of doing data driven advertisement will also increase but will still be relevant due to it being worth three times more as non-data driven advertisements (New York Magazine, 2018 cited in, Menon 2019).

2.1.1.2 Fast moving digital development

Another possible implication found in the literature are the ongoing process of digital development. Boban (2017) argues that the intensive development of technology makes the practices of consumer rights in the digital economy very difficult. New challenges will emerge at a high frequency which makes controlling the regulations and the consumer rights problematic. Concerns have been expressed to how GDPR regulations will co-exist with technologies such as artificial intelligence, Machine Learning paradigms and blockchain technologies (Boban, 2017; Menon 2019).

"….The field of marketing, specifically data-based marketing, will undergo significant changes but not be doomed".

Scott McNealy – CEO Sun Microsystems (Menon, 2019).

2.1.1.3 Privacy versus convenience

The GDPR regulations do make some concern regarding the usage of web surfing. The policy in the regulations can make the internet flooded with consent obtaining at every stage. The concern is highly valid due to the value of data-driven ads (Menon, 2019). Consumers will have to consider their privacy versus convenience often with the GDPR regulations while surfing the web.

One way to approach this and gain highly valuable costumer data is by making a tradeoff. Jaguar-Land Rover have considered doing just that with the enabling of blockchain technologies. (Reuters,

2019). Consumers will earn a certain amount of IOTA cryptocurrency for providing their data as they drive in their vehicles. The goal of the data is to achieve zero emissions, zero accidents, and zero congestion (Reuters, 2019). The GDPR regulations can also be a cornerstone in the subscription-based models such as Netflix, Spotify, Amazon Prime, etc. versus advertisements-based models such as television and radio (Menon, 2019).

2.1.1.4 Global GDPR implications

Another large possible implication found in the past literature is the concern for the applicability of the GDPR regulations in the EU for a global compliance (Tanaka, 2019). International companies located outside the EU which deal with customer from the EU, will need to comply their data accordingly to the GDPR regarding their customer within the EU. In practice, this compliance can be a costly and difficult task to achieve (Tanaka, 2019; Kolah et al., 2015).

> *"America's biggest corporations generate vast profits from their marketing activities with EU citizens. Under the GDPR, US-based companies that have never set foot within the EU will face significant fines of between 2 and 5 per cent of global turnover if they refuse to play by the new rules".*
>
> (Kolah et al., 2015).

Marketers from the US and UK did raise concern regarding the GDPR initiatives prior to 2016 since companies was given only two years until 25th of may 2018 to adapt to these new regulations. This was especially concerning since two years is a short period of time compared with the average length of most business and marketing contracts (Kolah et al., 2015).

For countries outside the EU, the language barriers had some influence as well to the GDPR regulations. For instance, in Japan the GDPR regulations was not fully translated until November of 2018 even though the law came into force on the 25th of May of 2018. After this translation, the guidelines were still subject to consultation and Japanese companies did not fully know how this

applied to them (Tanaka, 2019). Therefore, Japanese companies choose to follow a risk-based approach to the compliance of the EU GDPR regulations. This should be reviewed in the context of no Japanese company had been given any financially penalties for breach of data protection as of January 2019 (Tanaka, 2019). The solution for companies located outside the EU who still have customers from EU, is to get a DPO as the companies within the EU are required to do, though this is an expensive on-going expense (Kolah et al., 2015; Art 39 GDPR). Though no financial penalties have been given in Japan as of January of 2019, the tendencies are that lawyers are hired to help the companies to comply with the GDPR regulations due to a reputational risk that can cause the loss of customers (Tanaka, 2019).

2.2 CRM

Customers have more power than in the past. It means that through the strength of their bargaining power, customers have become more competitive in meeting their needs and companies are struggling in a more competitive market to meet these needs in the best possible way. Current literature often describes the importance of investigating and engaging with Customer Relationship Management. Customer Relationship Management (CRM) is a tool and strategy where the company tries to meet the customer's needs by creating relationships with the customer and providing them with satisfying experiences and has been a popular strategy for decades (Herman et al., 2021; Emciuc et al.,2020; Lam et al., 2013; Fairhurst, 2001). Fairhurst (2001) points out it is what the company chooses to do about the technology that makes them successful, not just the fact that they use it. The use of CRM helps the company to know what is expected and required of customers to create a bond so that a business relationship can be established and thus make it easier to create customer loyalty (Herman et al., 2021; Emciuc et al.,2020). For a successful implementation of CRM, it requires the best possible knowledge of the customer's specific needs (Anderson, Pearo, & Widener, 2008; Biswamohan & Bidhubhusan, 2012; Doorn & Verhoef, 2008 cited in Herman et al., 2021). Ngai (2005) believes that all SMEs should be motivated to adopt CRM, to create and manage relationships with customers effectively. Buttle (2004) found both defensive and offensive reasons to implement CRM. The defensive reasons are a company's fear of losing revenue and customers to opponents who are successful using CRM, and the offensive reasons to increase profitability by reducing costs as well as increasing revenue with happy and loyal customers (Buttle, 2004 cited in Rababah et al., 2011). Developments in Information Technology have made it manageable for companies to implement CRM, while at the same time it has provided an increased opportunity to gain a better understanding of customers as well as to predict their loyalty (Fletcher, 2001; Nitzan and Lao, 2011). With the use of CRM, the logic is that establishing a relationship with the customer is the best way

to create loyal and profitable customers (Herman et al., 2021; Bolton et al., 2004 cited in Lam et al., 2013). The tool is defined as a management initiative that allows the company to identify, attract and retain profitable customers (Gronroos, 2000; Parvatiyar & Sheth, 2001; Payne & Frow, 2005 in Herman et al., 2021; Emciuc et al., 2020). CRM is defined as both a strategy and a model, which also indicates that it is not only about having the right software to manage customer relationships, but also that the company's different processes changes so that all employees are involved in the strategy (Emciuc et al., 2020). CRM provides the ability to serve customers in real time by creating a relationship with any valuable customer based on the available customer information. Based on this information, the needs of each customer can be met. These can be different variations of product delivery, services, applications, order process and media usage (Herman et al., 2021). Furthermore, the customer information

and customer analyses can also be made. This can be to generate information, such as questionnaires, complaints or suggestions from customers who can help the company improve its services (Ernst et al., 2011 cited in Herman et al., 2021; Tsou and Chen, 2019). Through information, the implementation of CRM creates a closer relationship with the customer and gives the company optimal opportunities to meet the customer's needs.

2.2.1 Eletronic Customer Relationship Management

The major developments in technology, computers and telecommunications have supported the development of Internet technology (Herman et al., 2021). The technological changes has also led to the concept of electronic customer relationship management (e-CRM). Chaston and Mangles (Chaston and Mangles, 2003 cited in Lam et al., 2013) define e-CRM as, *"the use of internet technologies to facilitate the management of customer relationships."* e-CRM is an Internet-based application to achieve the CRM goals and it is considered that the Internet has been a great help in enabling CRM goals to be managed faster and better (Emciuc et al., 2020; Nosheen et al., 2011 in

Herman et al., 2021). In other words, e-CRM is a management approach that is widespread in the business world. It refers to marketing activities and techniques delivered over the Internet, with the aim of seeing and building good and profitable customer relationships (Lam et al., 2013). The transparency of the Internet gives both customers and marketers untold opportunities, and studies show that customers with a relationship with the company tend to spend more money (Porter, 2001 and Reichfeld and Schefter, 2000 cited in Lam et al., 2013). This concept is very similar to the traditional CRM, but with the assistance of technology and the Internet, the traditional principles are implemented mainly through a web platform (Herman et al., 2021; Emciuc et al., 2020). It allows access to international customers and suppliers, as well as the ability to collect data from stakeholders, which is critical to the company's competitiveness (Harrigan et al., 2008 cited Lam et al., 2013; Tsou and Chen, 2019). At the same time, it also gives the customer freedom in the form of the opportunity to buy a product, check their orders, check their purchase status, and demand further information about a product (Emciuc et al., 2020). It refers not only to the technology behind managing customer relations, but also to the business management processes used with customer strategies (Lam et al., 2013; Tsou and Chen, 2019). Data analysis and ERP systems are often used to communicate between frontend and backend operations (Emciuc et al., 2020). Data mining provides the ability to create tasks that support activities and decisions in your organization. e-CRM was originally used as interpersonal communication between businesses and customers, but as more devices can access an Internet connection (phones, tablets, computers), e-CRM also gets bigger (Herman et al., 2021). It also means that companies today are well known with the potential e-CRM offers to acquire and retain customers through their online system (Herman et al., 2021). Figure 1 shows the overall goals of nurturing and creating customer relationships.

Figure 1 - Goals of relationship management (Emciuc et al., 2019 cited in Emciuc et al., 2020)

Emciuc et al. (2020) and Fairhurst (2001) both see major benefits of e-CRM and the first mentioned have described the points below as the most important.

- *Customer data collection*
- *Customer profiling through quick data mining*
- *Offers a contact platform that is available 24/7*
- *Enables automation of a large part of the customer related activities*
- *Delivers better targeted products and services*
- *Acting based on customers' needs it in - creases customer satisfaction.*

Fairhurst (2001) saw many of the same benefits already in the early 21st century, but in addition to the benefits, Emciuc et al. (2020) also saw some challenges in implementing e-CRM systems that Fairhurst (2001) did not address. Challenges mainly relate to security challenges on both hardware and software. Hardware challenges are not as complex, whereas software problems may be so. Emciuc et al. (2020) describes major challenges as follows:

- *Data security, protect data from internet attacks – worms and malware*
- *Data access, who exactly has access to all customer data, and for what purposes are they using it*

- *Data accuracy, maintaining accurate data for successful CRM conversion is not an easy task. There is a big risk of having in - complete, duplicate or even „dirty" data that minimizes the potential of e-CRM system* (Emciuc, 2020).

The challenges indicate that technological developments, and especially the use of the Internet, have contributed to greater vulnerability that can be exploited. At the same time, it indicates that the storage of personal customer data is one of the points that poses the greatest challenge (Emciuc et al., 2020). Despite this, e-CRM is currently used by companies to innovate and improve their marketing performance and is especially useful in managing relationships with customers as profiles are created for each customer (Emciuc et al., 2020). In addition, the literature also shows that e-CRM has a positive impact on *companies' profits, creating satisfactory services by using integrated information, and displaying consistency, procedure and process of action problems* (Kennedy, 2006; Kim-Soon & Zulkili, 2012 Cited in Herman et al., 2021; Kaur and Kaur, 2016: Tsou and Chen, 2019). This is partly because it allows you to script and automate marketing campaigns that make it possible to discover the most profitable customers (Emciuc et al., 2020). If the company is able to leverage e-CRM to its full potential, the literature further demonstrates that it leads to an increase in satisfaction, loyalty, effective marketing, and cost reduction (Scullin, Fjermestad, & Romano, 2004 cited in Herman et al., 2021; Tsou and Chen, 2019). The quality of customer relationship management must be consistent with e-CRM features of interface. This includes mobile friendly website, special offers, local search bar, subscription, chat functions which must all increase the quality of interaction with the customers (Feinberg et al., 2002; Tsou and Chen 2019).

2.2.2 e-CRM in SMEs

Marketing in SMEs has many similarities in the literature to the CRM theory, but it is far from all company owners who use complex software or commit to strategic initiatives. Instead, CRM is used intuitively (Peltier et al., 2009; Street & Cameron, 2007; Zontanos & Anderson, 2004 Cited in

Harrigan et al., 2012). Previous research points out the use of internet-based technologies, in order to be able to have successful relationship marketing (Ab Hamid & Kassim, 2004; Chen & Ching, 2007; Zineldin, 2000 cited in Harrigan et al., 2012). In SMEs, these are often website, e-mails, and databases to build on top of traditional CRM activities. This can improve marketing orientation and customer focus (Dibrell, Davis, & Craig, 2008; Harrigan, Ramsey, & Ibbotson, 2008; Simmons, Armstrong, & Durkin, 2008 cited in Harrigan et al., 2012). The literature in the field has shown several advantages using e-CRM, which as stated in 2.21 are an increase in satisfaction, loyalty, effective marketing, and cost reduction (Scullin, Fjermestad, & Romano, 2004 cited in Herman et al., 2021; Tsou and Chen, 2019). In addition, we also saw an impact on *companies' profits, creating satisfactory services by using integrated information, and displaying consistency, procedure and process of action problems* (Kennedy, 2006; Kim-Soon & Zulkili, 2012 Cited in Herman et al., 2021; Kaur and Kaur, 2016: Tsou and Chen, 2019). Finally, e-CRM can also help SMEs become competitive on the international market (Harrigan et al., 2008 cited Lam et al., 2013; Tsou and Chen, 2019). Within e-CRM In SMEs, the main work is on communication with the customer and the management of information about the customers (Hart, Ozdemir, & Tagg, 2009; O'Cass & Weerawardena, 2009; O'Dwyer et al., 2009 in Harrigan et al., 2012). Communication to the customer In SMEs are often informative and open with the aim of creating mutual value (Gilmore, Gallagher, & Henry, 2007; Street & Cameron, 2007 in Harrigan et al., 2012). Unlike large companies, face-to-face communication is often seen in SMEs, creating a social aspect in relation to the customer (Gilmore et al., 2007; Ritchie & Brindley, 2005 in Harrigan et al., 2012). Front end internet-based technologies like the web page or e-mail facilitate interactions. At the same time, they can contribute to increased efficiency, greater personalization and reduce the cost of time (Nambisan & Baron, 2007; Ortega et al., 2008; Simmons et al., 2008 in Harrigan et al., 2012, Kaur and Kaur, 2016: Tsou and Chen, 2019). Therefore, it is importance for SMEs to maintain an effective level of communication while

collecting and managing information about customers (Payne& Frow, 2006; Westhead, Ucbasaran, & Wright, 2009 Cited in Harrigan et al., 2012). This can be customers' personal information, their requirements, order history, or current and expected value to the company. This information is necessary in marketing decisions. Among other things, it helps to segment the market, and not all SMEs have resources for large market research, which simply makes the relationship with the customer an even more important source of valuable information (Chan, 2005; Coltman, 2007; Keh, Nguyen, & Ng, 2007; Rai, Patnayakuni, & Seth, 2006; Hutchinson & Quintas, 2008; Keh et al., 2007 cited in Harrigan et al., 2012). e-CRM in SMEs should therefore include information, acquisition and analysis. The role in backend internet-based technologies is the administration, storage and processing of customer data. It provides the opportunity to personalize the offers to customers, predict their behavior and treat the valuable customers differently (Harrigan et al., 2012; Tsou and Chen, 2019; Emciuc et al., 2020). In the study of Harrigan et al. (2012), prescriptive contributions have been formed based on their research of e-CRM in SMEs. This introduced ten commandments in e-CRM that SMEs should follow to be successful. This can be seen in Figure 2.

To do e-CRM, SMEs should follow these 'ten commandments':

1) Use three key technologies: e-mail, website and database;
2) Use e-mail for ongoing and incomplex customer communication;
3) Use face-to-face communication for higher-quality, higher-value exchanges;
4) Design a website with 'key words' and search engine optimisation in mind;
5) Use website as a tool to gather information on customers;
6) Record customer interactions, both online and offline, in an accessible database;
7) Use information in database to manage customers across communication channels;
8) Use information in database to predict sales and facilitate annual planning;
9) Use information in database to identify customer trends and sell more; and
10) Use e-CRM to delegate relationship management duties to employees.

Figure 2 - Ten commandments for e-CRM (Harrigan et al., 2012)

Additionally, the study concludes that SMEs owners only must make small technological investments if the customer-orientation processes are in focus, as these are associated with day-to-day operations. Furthermore, the study also shows that e-CRM can be SMEs' most important tool for competing with larger companies by continuing with their market niche nationally while developing them internationally (Harrigan et al., 2012).

2.3 Google Privacy Sandbox

The Privacy Sandbox project was created by Google, which is the largest browser with 65% market share in 2021, with the goal of increasing user privacy by eliminating the usage of third-party cookies (chromium, 2021; Sweeny, 2021). The policies on third-party cookies have been changed before on multiple occasions. Even before the internet saw commercial coming of age in the 90s, the third-party cookies were a part of it. Its most important functionality at the time was Single sign-on(SSO) where a user can connect to multiple applications and systems using a single sign on. Personalized ads quickly became another critical function of third-party cookies (chromium, 2021).

Privacy have seen prior changes which affected advertisements and digital marketing. In 2005 the adblockers was enabled in various browsers to eliminate popup for users which was the preferred ad form in the mid 2000's. From 2015 and onwards the two large web browsers safari and firefox started to change their policies to stop the usage of third-party cookies on their platforms (Sweeny, 2021). The GDPR regulations from the EU is the latest change to online privacy for users and have been deemed by people in the industry and digital marketing to be the most significant change in decades (Menon, 2019). Google is the last of the large web browsers to allow for third-party cookies (Sweeny, 2021). The Privacy Sandbox project was announced in January 2020 and should be fully implemented by the end of 2022 (markedsforing.dk 2021; Sweeny, 2021).

The Privacy Sandbox goal is to develop a set of open standards which would allow for personalized ads without requiring that you divulge individually identifying data. The mission of The Privacy Sandbox project's mission is to *"Create a thriving web ecosystem that is respectful of users and private by default"* (Chromium, 2021).

2.3.1 The Privacy Sandbox

Michael Kleber, one of the engineers behind The Privacy Sandbox, has presented the online privacy model on GitHub (Kleber, 2021). The starting point is current technological possibilities, which make

it possible to create "*widely-shared cross-site identities, and so to an ability to perform web-wide tracking of a person's browsing activity*" (Kleber, 2021). While this identity can be used "*to weave together a record of much of a person's browsing history, a core privacy concern with today's web,*" it can simultaneously "*play a significant role in today's web advertising ecosystem.*" (Kleber, 2021). Chrome has created a new identity model aimed at increasing privacy while allowing the necessary amounts of information flow to support marketers (Kleber, 2021). The model contains three focal points. First, the identity should be broken down by first-party sites so that the identity is not recognizable on different pages and your activity on one website is not comparable to your activity on another. Secondly, third-parties must have access to the identities of the first-party if the identities remain shared by the First-party. Finally, a per-first-party identity must be associated with a few amounts of information across websites if the information is not too identifying (Kleber, 2021).

The Privacy Sandbox indicates an exciting shift in web marketing. At present, third-party cookies provide the ability to make one to one marketing, where marketers can create targeted online campaigns aimed at individuals *(identified pseudonymously through cookie IDs and subject to applicable privacy laws*) (Geradin et al., 2020; Larsen, 2021). Instead, The Google Privacy Sandbox tries to do web marketing at the cohort level, to avoid the identification of the individual. Chetna Bindra, Google Senior Product Manager believes that the future is cohorts, and this is also indicated in all privacy sandbox solutions (Geradin et al., 2020; Larsen, 2021). Chetna Bindre states, that The Google Privacy Sandbox is "*envisioned to ensure that we are moving away from one-to-one identity; the shift toward aggregation and cohorts will serve as "the foundation for privacy preserving APIs that allow for interest-based advertising while preventing cross-site tracking*" (Schiff, 2020*b*).

The tool to complete this is Chrome's own browser. The browser must ensure the privacy of the individual users and thus have the ultimate control over the remaining players in the web ecosystem (Geradin et al., 2020). Schiff (2020b) is convinced that browsers generally believe that they should

oversee critical functions such as ad auctions. In relation to this, The Privacy Sandbox will have parts of the data and its processing to take place on the individual device. This minimizes the data that leaves the device and builds on advances in edge computing, working towards being less dependent on the cloud (Geradin et al., 2020; Root, 2019).

This contrasts with today's computing, which often goes on the server side. E.g., by AdTech companies. Therefore, the Privacy Sandbox is also a proposal containing the technology to protect client-side privacy (Geradin et al., 2020). In their study of The Google Privacy Sandbox, Geradin et al. (2020) warns against the ability of publishers to individually identify users when they visit the website either through user login or first-party cookies. Publishers can still profile users based on the user activity on the Web site. However, it will not be possible to benefit these profiles with user activity on third-party websites, as it can today through third-party cookies. This option benefits the publishers with the largest base of users. Still, it makes Geradin et al. (2020) question the privacy benefits of Google Privacy Sandbox, which they estimate may be more limited than first thought. Users will still have every click tracked from each of the individual publishers (Geradin et al., 2020; Bannister, 2020). It is a necessity for companies to function, but in a case like Google, which operates many consumer-facing services, such as Gmail and YouTube, the ability to create user profiles across these will be there. It also means that the boundary between Google's platform and the open web is reduced, as the open web becomes part of Google's environment as soon as you are logged in (Geradin et al., 2020). In other words, The Google Privacy Sandbox puts an end to third-party cookies, but they allow tracking on platforms already known to monitor, e.g., Google and Facebook. There is nothing in their proposal that should go in and prevent the crimes that can happen on these platforms. Geradin et al. (2020) points out in their study that they do not want to challenge Google's intentions, but that the high emphasis on cross-site tracking can help divert attention from the tracking on individual

platforms. Schiff (2020c) has experienced the same trend in an interview with Jeremy Tilman. Jeremy Tilman says:

> *"Everybody is the hero of their own story and that informs how they approach privacy. Take Google vs. Facebook. Each has decided to define privacy on its own terms. At Facebook, Mark Zuckerberg defines privacy as the need for end-to-end encrypted messaging. Google defines it as protecting against any data collection that it's not doing itself. Both can be seen as a way to consolidate their own power."*
>
> (Schiff, 2020c)

At the same time, the CMA has observed a trend among larger companies, which they believe favor measures that reduce data flow between AdTech companies (Geradin et al., 2020). They use Google as an example and thus write in their report:

> *..." the interests of large companies, such as Google, with direct access to a large amount of personal data are aligned with this aspect of data protection: restricting the flow of data may increase these companies' advantage over competing intermediaries "*
>
> (CMA, 2020).

There is not the same interest in the protection of data enrolled in GDPR, as it makes it more difficult to use the collected data from the user-oriented services for their AdTech offerings. Geradin et al (2020) sees it because of corporate interest deviating from the GDPR. CMA (2020) shares the same beliefs, which is reflected in the following quote from their report.

> *"unlike in relation to sharing data with third-parties, in terms of purpose limitation the incentives of the largest market participants are not aligned with*

data protection, as it is in their interest to fully exploit the value of their data by using it for multiple purposes"

(CMA, 2020).

Google has encountered different views on their project. From the start, they have invited all stakeholders to help with the preparation of The Google Pivacy Sandbox project. This is done through GitHub and W3C whose proposals will be presented later in this section. GitHub is a coding platform that allows you to work on large projects together. W3C is an abbreviation for World Wide Web Consortium, the purpose behind this is to create the right environment to ensure that the long-term development of the Internet happens to its greatest potential.

By involving multiple stakeholders in the development of The Privacy Sandbox, they also pre-empt accusations of anti-competitive behavior. This involvement is an indicator that The Privacy Sandbox is a tool made to innovate on GDPR. The web ecosystem is listened to and is not just a product developed exclusively by Google (Geradin et al., 2020; Larsen, 2021, Schiff, 2020c).

However, several AdTech players have sent a letter to the W3C advisory board back in July 2020 as they believe the W3C process is heavily dominated by large companies. Based on the answer, W3C seemed to be open to the topic, but it has not been possible to find a follow-up to this (Geradin et al., 2020; W3C, 2020). Schiff (2020a) has further described how the U.S. House Antitrust Report also points to the imbalance in W3C. One member is quoted as saying: "*Though standards bodies like the W3C give the impression of being a place where browser vendors collaborate to improve the web platform, in reality, Google's monopoly position and aggressive rate of shipping non-standard features frequently reduce standards bodies to codifying web features and decisions Google has already made."* (Schiff, 2020a; Geradin et al., 2020). At the same time, the article also emphasizes how Google uses Chrome's dominance (Chrome has about 66 percent of the market) to set the standard for the industry (Schiff, 2020a). The literature examined indicates that Google Privacy

Sandbox also includes several concerns. It is questioned whether it is a collaboration with industry in trying to find the best solution to innovate GDPR (CMA, 2020; Schiff, 2020a; Geradin et al., 2020).

2.3.2 The technical aspect of the Google Privacy Sandbox proposals.

Digital marketing relies heavily on cross-site tracking, meaning the sharing of consumers personal data across multiple sites. This is done by using third-party cookies (Geradin et al., 2020). These cookies can afterwards be segmented very specifically and divide consumers into advertisement categories. There are three main categories where cookies are used in digital advertisements (Chromium, 2021).

- **First-party and contextual information.** For instance, put this specific ad on websites about motorcycles.
- **General information about the interests of the person who is going to see the ad.** E.g., show this ad to music lovers.
- **Specific previous actions the person has taken.** Companies offering discount on items you had previously put in a basket (Chromium, 2021).

Category 1 is not affected by third-party cookies and the Google Privacy Sandbox. The solution for category 2 according to Google Privacy Sandbox has been named FLoC (Chromium, 2021).

2.3.2.1 FLoC

The aim of the FLoC "Federated Learning of Cohorts" is to enabling advertising on the internet without the ability to identifying specific individuals (Geradin et al., 2020; Chromium, 2021).

> *"The browser uses machine learning algorithms to develop a cohort based on the sites that an individual visits".*
>
> **(chromium, 2021).**

The FLoC will be segmenting consumer data into cohorts using machine learning algorithms. A FLoC cohort gathers thousands of people's data, derived from the user's browsing history and divide them into specific clusters. The first goal of a cluster is to firstly be useful, meaning they need to be precise. The second goal is to be private, which means they need a certain number of users in each cluster to prevent any user from be identified (Geradin et al., 2020; Chromium, 2021). The Chrome browser updates the cohort in real time as the user traverses the web. The personal data of the individual will not be uploaded or shared, but only kept locally, which preserve user privacy (Geradin et al., 2020; Chromium, 2021). Once the cluster in the cohort is generated, it will be assigned a FLoC ID (Geradin et al., 2020).

2.3.2.2 Bird proposals

For the third category there have been several proposals to possible solutions which have been named the "Bird proposals". With third-party cookies, a large proportion of online advertising have been based on showing an ad to a specific user who is potentially interested in a product based on his or her past browser history (Chromium, 2021). An example of this could be a user visiting an e-commerce and add an item to their shopping cart, but do not purchase this item. Cookies will enable to identify the user and assign her to a group of interested buyers. This cookie-id will identify the user when browsing the web and an AdTech vendor can bid to the auction to run a retargeting ad for this specific item (Geradin et al., 2020). The reasoning for multiple bird proposals is because of the key concern regarding the centralization of data among a few large players (Geradin et al, 2020).

..."It makes sense to aggregate the data and make ads to groups rather than individuals"

(Sweeney et al., 2021).

Sweeny also points out that the initially proposal is Google owned and Google operated, so there will be concerns about oligopoly states, which is why AdTech companies are working on various proposals (Sweeney et al., 2021).

2.3.2.2.1 TURTLEDOVE

The first proposal from Google Privacy Sandbox was TURTLEDOVE which stands for *"Two Uncorrelated Requests, Then Locally-Executed Decision On Victory"* (Geradin et al., 2020; Chromium, 2021). The goal of the TURTLEDOVE proposal is to offer a new API while offering some key privacy advancements (Chromium, 2021).

Key privacy advancements:

- *The browser, not the advertiser, holds the information about what the advertiser thinks a person is interested in (Chromium, 2021).*
- *Advertisers can serve ads based on an interest, but cannot combine that interest with other information about the person — in particular, with who they are or what page they are visiting (Chromium, 2021).*
- *Web sites the person visits, and the ad networks those sites use, cannot learn about their visitors' ad interests (Chromium, 2021).*

In order to reach these privacy advancements for the TURTLEDOVE, certain outcome goals for the API have been set (Chromium, 2021).

- *People who like ads that remind them of sites they're interested in can keep seeing those sorts of ads (Chromium, 2021).*
- *People who don't like these types of ads can avoid seeing them (Chromium, 2021).*
- *People who wonder "how the ad knew" what they were interested in can get a clear, accurate answer (Chromium, 2021).*
- *People who wish to sever their association with the interest group can do so, and can expect to stop seeing ads targeting the group (Chromium, 2021).*
- *Advertisers cannot learn the browsing habits of any specific people, even ones who have joined multiple interest groups (Chromium, 2021).*

- *Web sites cannot learn the interest groups of any specific people who visit them (Chromium, 2021).*

An example of the mechanisms behind the TURTLEDOVE and how it would operate could follow as such: Firstly, a marketer sends a request to the browser, of a user which visit the marketer's website, to join an interest group. When this user visits another website, the browser then sends to the publisher's ad network two uncorrelated ad requests and a contextual request. This includes information regarding the website in which the user is visiting and first-party targeting information (Geradin et al., 2020). Additionally, a request is sent to obtain information if the user belong to a certain interest group. When the browser receives the responses to these requests, an auction run on the device and selects the winner. The winning ad is then showcased by the browser (Geradin et al., 2020).

Multiple solutions have been proposed from relevant interest groups to improve TURLTEDOVE. The most notably have been listed below and will be described further.

- *SPARROW from Criteo, which entered WICG incubation jointly with TURLTEDOVE.*
- *Dovekey from Google Ads.*
- *PARRROT from Magnite.*
- *TERN from NextRoll.*
- *Outcome-based TURTLEDOVE and Product-level TURTLEDOVE from RTB House* (Chromium, 2021).

2.3.2.2.2 SPARROW

SPARROW is an abbreviation for "*Secure Private Advertising, Remotely Run On Webserver*" has been developed as a proposal by the French AdTech company Criteo. It is developed as an enhancement to TURTLEDOVE. The aim of SPARROW is to create more control and transparency (Geradin et al., 2020). SPARROW differ from TURTLEDOVE by moving the interest group auction

to an independent third-party. This is referred to as a Gatekeeper, which would maintain auctions and personal data without any affiliation to other tech entities (Geradin et al., 2020).

2.3.2.2.3 Dovekey

Dovekey from Google Ads was developed with the goal of preserve the benefits from SPARROW and mitigate its drawbacks. The overall proposal was to have the Gatekeeper to act as simple "lookup table" (Geradin et al., 2020; Chromium, 2021). In Dovekey a Key-Value server obtains a key from the browser which is used in a contextual signal and an interest group, and then returns a bid on the ad. The overall difference between Dovekey and SPARROW is that the Gatekeeper in Dovekey do not operate the interest group auction within its own server. This has caused some concern in the industry if Google should run the ad server and Dovekey would be the Gatekeeper (Geradin et al., 2020; Chromium, 2021).

2.3.2.2.4 PARRROT

PARRROT is an abbreviation of "*Publisher Auction Responsibility Retention Revision of TURTLEDOVE*". It is developed by the AdTech vendor Magnite. PARRROT is also developed as an enhancement to TURTLEDOVE. The difference in PARRROT is that the publisher and not the browser have the control of the auctions (Geradin et al., 2020; Chromium, 2021).

2.3.2.2.5 TERN

TERN is a proposal from the AdTech company NextRoll. The overall goal of TERNs proposal is to improve the TURTLEDOVE proposal by Google. NextRoll has developed TERN by gathering experience and feedback from the industry into a single document with all the specifications (Chromium, 2021). It is hoped that these consensus-based enhancements will lead to a productive discussion and be applied to the original proposal of TURTLEDOVE (Chromium, 2021).

The TERN proposal contains the following suggestions to TURTLEDOVE:

- *Clarifying the necessary inputs to participate in an auction*
- *Clarifying how to deal with multiple ad formats*
- *Reducing networking overhead by streamlining the data which flows through SSPs*
- *Eliminating the need for thresholds on interest group sizes*
- *Reducing the time to potentially deliver an impression*
- *Better supporting dynamic creative and product recommendation use cases*
- *Supporting some functionality of third-party tags*
- *Further specifying auditability of delivered ad creatives*
- *Enabling brand safety for both advertisers and publishers*
- *Creating a mechanism for trackability metrics*
- *Adding a private Data object that can never escape the browser, but improve bidding signals (among potential other use cases)*
- *Specifying a mechanism to support creating interest groups based on publisher browsing behavior*
- *Allowing publishers to retain control of auction dynamics, while encouraging second-price auctions*
- *Specifying frequency capping and optimization*
- *A monosyllabic acronym that is still thematically avian*

(Chromium, 2021).

2.3.2.2.6 Outcome-based TURTLEDOVE

The retargeting company RTB House have made their proposal how to improve the TURTLEDOVE from Google. Their two proposals are named the Outcome-based TURTLEDOVE and Product-level TURTLEDOVE (Chromium, 2021). The goal of the Outcome-based TURTLEDOVE is to make the ad bidding more accurate. In the original TURTLEDOVE the objective of not being able to

microtargeting a specific person has been solved with focusing on restrictions to the input. The predominantly restriction is the bidding for signals to be identical for all members within an interest group (Chromium, 2021). As the name suggests, the proposal from RTB House is focusing on the output by monitor and validate bidding output. RTB House has concerns for the bidding accuracy for ads with the original TURTLEDOVE and especially when the ads are targeting larger audiences. At their proposal the outcome-based approach should be possible to retain a high level of bidding accuracy while still protecting individual consumer data in microtargeting (Chromium, 2021). The proposal allows the bidders to store custom bidding signals. These signals would then be kept browser side and be used only for bidding. This would ensure the TURTLEDOVE's current privacy guarantees (Chromium, 2021).

2.3.2.2.7 Product-level TURTLEDOVE

The second proposal from RTB House is the Product-level TURTLEDOVE. This proposal seeks to improve the TURTLEDOVEs product recommendation quality, especially for e-commerce advertisers (Chromium, 2021). The Product-level TURTLEDOVE approaches the user's privacy with a new structure compared to the original proposal which uses an audience-size approach. The Product-level TURTLEDOVE includes:

- *Advertiser making all product web bundles available for public inspection (e.g. via ".well-known" resources)*
- *The browser ensuring that each component (products and template) of the ad has been publicly available before an impression*
- *If we structure the product assets as well, we may also enforce more granular auditability: of the images, landing pages, text*

The goal of these changes from RTB House are:

- *Minimal audience thresholds could be lowered or even eliminated. This enables rare-item recommendations.*
- *With no audience thresholds, the browser does not need to keep track of interest group sizes.*
- *The product and template web bundles can be inspected and audited for unsafe content and PII.*
- *There is the additional burden of the audit itself.*

(Chromium, 2021).

3 Conceptualization

In this section the priori analytical framework with the preconceptions is presented. The GDPR has resulted in a greater focus on privacy. This has led Google to develop their chrome browser to become the individuals security on the web. This is being developed in cooperation with stakeholders and is still an ongoing process. There is talk of a paradigm shift in digital marketing, but no one has yet looked at the importance this is going to have for SMEs e-CRM who simply use internet tecnology tools to manage their customer relationships. This has led to figure 3.

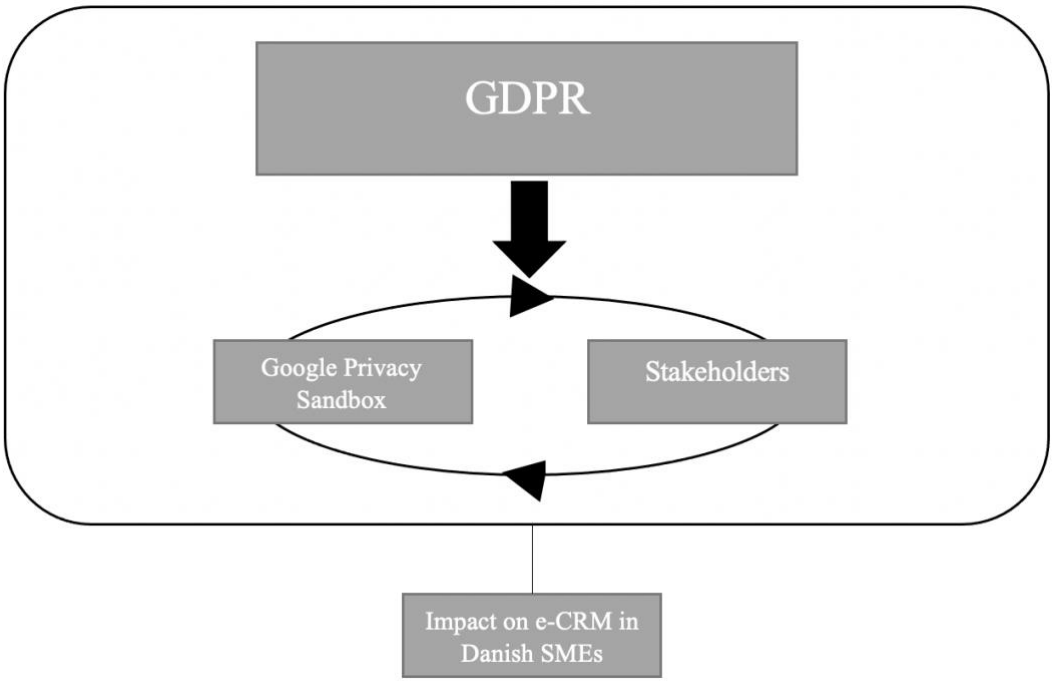

Figure 3 - Priori framework (own creation)

The literature suggests that the implementation of GDPR in 2018 will have a significant impact on the digital marketing going forward. The aim is to increase the individual's privacy, which makes it difficult for companies to track individual consumers. Google has innovated on GDPR with their Google Privacy Sandbox project. With the implementation of GDPR, searches for consumer privacy

are vastly increasing and Google, the most used web browser, wants to satisfy the increased demand (The economist, 2018). Third-Party Cookies are being eliminated and replaced with the implementation of FloC based Cohorts. The browser is the consumer's guarantee of maintaining their privacy. Google Privacy Sandbox is not yet fully developed. In collaboration with GitHub and W3C, they have enabled all stakeholders to help develop Google Privacy Sandbox. This is an ongoing process where stakeholders make different bids for the best version. The literature indicates some resistance from experts around the world. Despite its collaboration with W3C and transparency through GitHub, both AdTech experts, the CMA and the U.S. House Antitrust Report have criticized Google's project. At the same time, several experts say that the proposals presented are merely for increasing their own competitiveness (Geradin et al., 2020; CMA, 2020; Sweeney et al., 2021; Chronium, 2021; Schiff, 2020a).

Another key concern is the centralization of data among a few large players. Michael Sweeny, head of Marketing at Clearcode, believes from a policy standpoint that Google's project offers many good things and is generally of the belief that *..." it makes sense to aggregate the data and make ads to groups rather than individuals"* (Sweeney et al., 2021). At the same time, he also points out that it is Google owned, and Google operated, so there will be concerns about oligopoly states which is why AdTech companies are working on various TURTELDOVE proposals (Sweeney et al., 2021). Further, questions are being asked about whether ad performance and cohort data can perform as well as Google itself proclaims. It is worth adding that monitoring on the company's own platform is still possible. Therefore, companies like Google and Facebook will be able to maintain almost the same amount of monitoring and possibly the same ad performance (Geradin et al., 2020).

On the contrary it is interesting to analyze what impact it has on SMEs. The literature in this area indicates that SMEs often do not use complex CRM systems, but instead use e-CRM and thus the available Internet technologies to manage customer relations. According to the literature, e-CRM is

largely about maintaining an effective level of communication while collecting and managing information about customers. It will be interesting to analyze how e-CRM will be affected by the implementation of Google Privacy Sandbox and which elements of e-CRM will be affected. This is due to the predominantly discussions in the literature regarding the functionality and performance of ads in the ongoing process of developing the Google Privacy Sandbox.

In regard to this master thesis, it is important to emphasize the interest of the various stakeholders. The development of Google Privacy Sandbox is a large change in digital marketing and the stakeholders including Google have extensive incitements towards developing a platform which favors their interest. Ethically there are also some concerns when it comes to store such a large amount of consumer data. This will be discussed further in section 6.

4 Methodology

This section shows the methodological choices of this master thesis. The reader will be given an overview of these, and at the same time given an insight into the researchers' vision and thoughts behind the study. In addition, this section also provides a certain degree of assurance that academic standards are being adhered to. The purpose is to create transparency for the reader, including how knowledge is formed according to the paradigm and what data methods support this.

4.1 Methodological standpoint

This section seeks to explain the study perception of reality, as this will determine the assumptions in the study as well as form the basis for the chosen methods for processing data. These choices will always relate to the researcher's assumption of the phenomenon (ontology), grounds of knowledge (epistemology) and the relationship between the individual and its surroundings (Burrell & Morgan, 2005). The methodological choices are determined by the studys field of research. As suggested by this thesis purpose, to determine *How Google Privacy Sandbox will impact e-CRM of Danish SMEs in e-commerce,* the goal is to understand the complexity of the phenomenon in the context of Danish SMEs.

Arbnor and Bjerke (2008) are known for their classification of methodological approaches to business studies and are regularly used in business research. Arbnor and Bjerke (2008) differentiate this into the analytical approach, the system approach and the actor approach, all of which have a different view of reality and the way of creating knowledge. As it can be inferred from figure 4, these approaches may overlap.

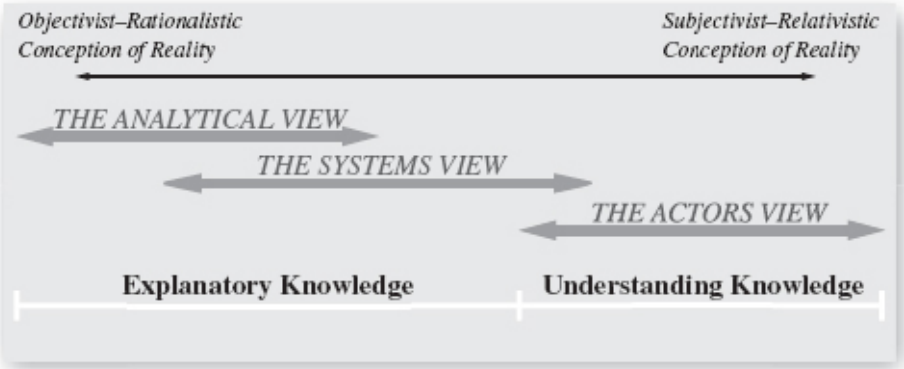

Figure 4 - The boundary between explanatory and understanding knowledge (Arbnor and Bjerke, 2008)

The analytical approach seeks causal explanations of objective reality. This approach is closely related to traditional positivism, where quantitative data are often analyzed through statistical methods (Gammelgaard, 2004; Arbnor & Bjerke, 2008). Conversely, the actor approach is a subjective view of reality. Reality is perceived as a social construct formed from its observers. This means that information is perceived subjectively and ambiguously (Arbnor & Bjerke, 2008). As this approach often seeks to understand the intention of the actors, qualitative methods are primarily used (Gammelgaard, 2004). Between the analytical approach and the actor approach is the system approach. This is where this master thesis is placed. Like the analytical approach, the existence of an objective reality is accepted (Arbnor & Bjerke, 2008). The difference is that the system approach is based on system theory with a holistic perspective. In other words, reality is formed by components that are interdependent. Unlike the analytical approach, where causal causation is sought, the system approach is contextual and is often used in both qualitative and quantitative case studies (Gammelgaard, 2004).

This master thesis' position between explanatics and hermeneutics makes the choice of critical realism obvious, since explanation and understanding can be used together (Welch et al., 2011). The choice of critical realism means that the researcher accepts that there is a reality independent of the

researcher. Thus, it is accepted that reality is socially constructed (Welch et al., 2011). Both are accepted based on the subjectivity found in the observer's conception of reality, as this is often the only way to examine reality. In other words, there will always be a hermeneutic element present (Welch et al., 2011; Sayer, 2000). Critical realism wants to explain via causal mechanisms but accept that explanation is contextual and the individual mechanisms can produce different results in different contexts (Welch et al., 2011). Sayer (2000) has illustrated critical realism's view of causation, which can be seen in the figure below.

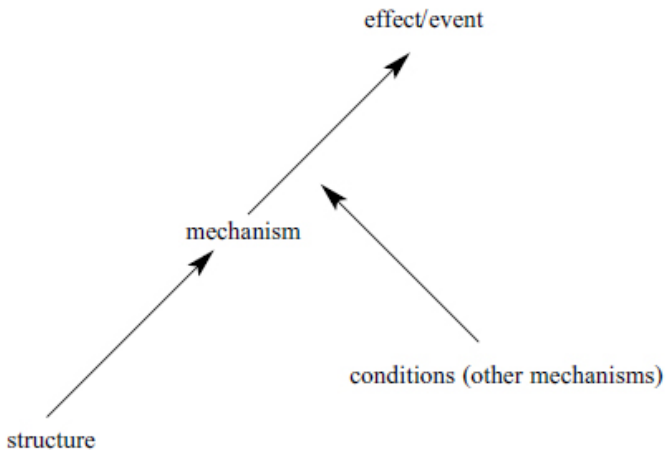

Figure 5 - Critical realist view of causation (Sayer, 2000)

The study wants to investigate Google Privacy Sandbox's impact on e-CRM in the context of Danish SMEs. In addition, the study wants to understand what specific mechanisms are affected by Google's innovation of GDPR and how these match consumer expectations to online privacy. Since the study wants to develop theory, based on a case study, critical realism is followed. This approach is known for the variety of research methods, as well as its decent fit with the case study (Sayer, 2000; Welch et al., 2011). Lastly, critical realism stands out by accepting both induction and deduction, and thus often follows an abductive process described in the section below (Welch et al., 2011).

4.2 Abductive approach to theory building

Deductive and inductive method are often used scientific methods. The deductive seeks to test theory and hypotheses in which the inductive method constructs new theories by generalizing from empirical observations. In addition, usually only one of these methods is used in qualitative empirical research. Critical realism is critical to the use of either inductive or deductive method but believes an abductive process should be used in theory development (Welch et al., 2011). Abduction combines both induction and deduction. According to Paavola and Hakkarainen (2006), an abductive strategy is ideal in the search for a phenomenon that has not yet been explained or is poorly explained in the research field (Paavola and Hakkarainen, 2006 cited in Pelto, 2013). This leads us to this master thesis problem formulation: Google Privacy Sandbox is an innovation that is not yet widely known. In addition, there is a scientific gap in understanding what the implementation of Google Privacy Sandbox will have an impact on SMEs who rely heavily on e-CRM. The abductive approach takes into account that the researcher's interest changes continuously. It can be as a consequence of new ideas that can occur from empirical perceptions, literature or intuitively, and guide the researcher towards new theories (Grönfors, 1982 cited in Pelto, 2013). Abduction also allows a less theoretical research process and permits to develop theory based on data (Järvensivu & Törnroos 2010; Pelto, 2013). This master thesis posteriory framework is built on the acquired knowledge about GDPR, Google Privacy Sandbox and e-CRM in SMEs, as well as the empirical data from the case study. From this point of view, the project is more of a theoretical development than a theoretical generation (Dubois & Gadde, 2002). The framework helps to focus the analysis, while Carson et al (2001) argues that the framework that guides the empirical study should be able to be changed continuously with the results of the empirical data. Andersen and Kragh (2010) have two approaches to theory evolving case research. They have the in vivo approach, where an overall theoretical framework constantly changes from the empirical data and then they have the ex ante approach which suggests that theoretical contradictions

is necessary to develop theory. In this study, the approach is very reminiscent of Andersen and Kragh's (2010) In Vivo approach, where through an abductive approach in the case study, the framework is continuously developed with the empirical work. This master thesis research process started with a literature review on the three themes GDPR, Google Privacy Sandbox and e-CRM. This is the breeding ground for the master thesis priori framework, which changes with the data collection and the new insights the analysis provides. In an empirical study likes this, Andersen and Kragh (2010) point out the importance of the researcher not being blinded by his specialization. There is a challenge in developing theoretical notion that may be outside the associated paradigm. It is therefore important as a researcher to be able to disregard theoretical framing to introduce new theory. The posteriory framework of the master thesis is based on the literature review, the theoretical concepts as well as the empirical findings.

4.3 Case study

Within research, the case study is a strategy which focuses on understanding the dynamics present within a single setting and is often found represented in social science research (Eisenhardt 1989; Yin 2014). According to Yin (2014), the case study is the preferred method when the problem formulation starts with either why or how. Additionally, the case study is preferred when the researcher has little control over behavioral events as well as when the study focus is a contemporary phenomenon (Yin, 2014). Case study as a research strategy have been found to be the most popular qualitative research approach (Piekkari et al., 2009). Moreover, when the area of research is relatively less known, and the researcher is engaged in theory-building, the case study strategy is especially considered favorable (Ghauri 2004,). As this master thesis studies the impact of a possible change in digital marketing and this area is relatively unknown, the case study has been chosen as the research strategy.

There are several case study decisions for the researcher to be made before starting the case study. Firstly, how the study is found. Secondly, what criteria are followed in the choice of case and lastly, how many cases are involved (Yin, 2014; Eduardsen, 2020). Furthermore, when conducting research with case study as the research strategy, the case must be corresponding to the theoretical framework of the project (Ghauri 2004).

This master thesis field of research has been found in close cooperation with the study group's supervisor Svetla Marinova and the CMO of Freeway ApS, Thomas Røhr Kristiansen. This master thesis is written as a single case study with collaboration with Freeway ApS and its subsidiaries. However multiple case study is also an option and whether single or multiple case study provides best basis for the research result is largely debated (Flyvbjerg, 2010; Miles & Huberman 1994). The case corresponds with the theoretical framework as Freeway ApS is a Danish SME which operates more than 30 different online e-commences and a heavily reliant on third-party cookies.

To further distinguish the case study, multiple options is at hand. According to Welch et al. (2011) in figure 6 a case study can be divided into four different methods. This model differentiate emphasis on contextualization and emphasis on casual explanation. Within this spectrum this master thesis, with its critical realist approach, is using the contextualized explanation (Welch et al. 2011).

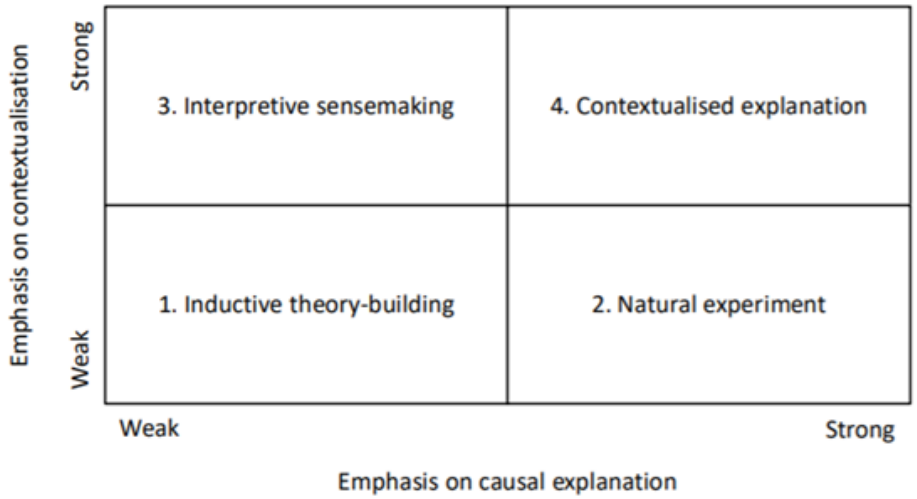

Figure 6 - Four methods of theorizing from case studies (Welch et al. 2011)

The nature of research process for contextualized explanation is a subjective search for causes, which align with this master thesis problem formulation and research strategy. Historically, the case study has been accused of being more likely to produce subjective results which has been referred to as less rigoristic than quantitative and hypothetical deductive methods. However, this criticism is not justified according to Bent Flyvbjerg (Flyvbjerg, 2010). Flyvbjerg (2010) finds in-depth case studies to be the studies with biased assumptions, opinions, concepts, and wrongly hypothesis. Thus, their data has led them to revise their hypotheses (Flyvbjerg, 2010). The strength of this case study method is the causes of effects explanations (Welch et al. 2011). In this case the cause of effect, is the Google Privacy Sandbox on e-CRM for Danish SMEs. Furthermore, Easton (2010) argues that a critical realist approach is especially suitable for studying complex phenomena such as inter-organizational relationships and networks.

4.4 Empirical data collection

In this section, the reader is presented with the different data collection methods. The primary source of empirical data collection within this master thesis is from the case study with Freeway ApS. This includes a semi structured interview with Thomas Kristiansen, CMO in Freeway ApS and two e-mail interviews with Line Lehman, legal consultant at Freeway ApS and Rasmus Olsen, SEO specialist at Freeway ApS. Additionally, two e-mail interviews with Michael Sweeney, Head of Marketing in Clearcode and Jan Skov, COO in Raptor Services have been conducted, along with a consumer survey.

The semi structured interview with Thomas Kristiansen is the breeding ground for the e-mail interviews with the specialists in their respective field. These interviews have provided empirical data from different field of work to support the context of the case study.

Lastly, this section will provide the reader with an overview of the processes behind the development of the survey. The purpose of the survey is to see whether the changes to the side of Danish SMEs is align with the customers' expectations.

4.4.1 Semi structured interview

When there is a small population of respondents, it provides incitements to conduct a qualitative interview (Eduardsen, 2020). The semi structured interview is with Thomas Kristiansen, CMO of Freeway ApS. Kvale & Brinkmann, (2014) defines an interview as "*a conversation that has a structure and a purpose*". An interview can be differentiated between a qualitative or quantitative method (Eduardsen, 2020). This is illustrated in table 1.

Table 1 - Interview form (Eduardsen, 2020)

Quantitative	Qualitative
Structured to maximize reliability and validity of measurement	Generality in formulation of research questions
The investigation/testing of clearly specified questions	Interviewee perspectives
Interviewer led	Interviewee led/digression
Keep to 'script'	Depart from script
Inflexible/standardised	Flexible and responsive
Responses easily coded	'Rich and thick' description
Primarily 'snap shot' (c.f. longitudinal)	Process and change/repeat

For the interview with the CMO of Freeway ApS Thomas Kristiansen, the qualitative research method will be used. To enhance the quality of the research interview, the opinions of the interviewed on the topic of Google Privacy Sandbox will be accessed with an open beginning. The reasoning for this is to see the respondent's honest opinion on the topic (Kvale & Brinkmann, 2014). The findings from the thematic literature review on GDPR, e-CRM and Google Privacy Sandbox have been shared with the respondent. Additionally, the key definitions and the semi-structured interview questions has been forwarded prior to the interview. The qualitative research interview will be conceptualized using the seven stages from Kvale and Brinkmann to ensure quality, legitimacy and transparency (Kvale & Brinkmann, 2014). The seven stages from Kvale & Brinmann (2014) consist of thematizing, design, interview, transcript, analyze, verification and lastly report.

4.4.1.1 Thematizing

In the thematizing stage, the researcher needs to identify the purpose of the interview. This includes what should be clarified and why it should be clarified (Kvale & Brinkmann, 2014). For the semi-structured interview with CMO of Freeway ApS, the clarification goal is to obtain knowledge to answer research question 1 and 2 of this master thesis and provide insight into answering the problem formulation as well. Firstly, we wish to clarify the implications of the GDPR in a Danish SME.

Secondly, how do the organization prepare for the implementation of Google Privacy Sandbox. Lastly, we wish to clarify the possible impacts of Google Privacy Sandbox on e-CRM of Danish SMEs.

4.4.1.2 Design

The aim of the design stage is defining the "how" of the interview. This includes the methods used to obtain the information, which has been clarified in the thematizing stage. The design stage can also be viewed as the planning stage which have the procedure and techniques for the interview (Kvale & Brinkmann, 2014). This interview has been constructed as a semi-structured research interview with the CMO of Freeway ApS, Thomas Kristiansen. An interview guide has been created which contains the problem formulation, research questions, the finding from the thematic literature review along interview questions and the information from the thematizing stage. The interview guide has been sent to the respondent prior to the interview, with the purpose of common knowledge of the research. Additionally, the respondent has had the opportunity to prepare for new perspectives and questions for the research which can be relevant (Kvale & Brinkmann, 2014).

4.4.1.3 Interview

According to Kvale & Brinkmann (2014), when a researcher conducts an interview, the beginning is of great importance. As an interviewer, you must make the respondent clear of whom you are and why you requested this interview which includes the thematizing stage. This will provide for a good beginning which can lead to the respondent to talk openly about the topic (Kvale & Brinkmann, 2014). Prior to the interview, the interview guide was sent to the respondent which was read and further discussed briefly before the interview was conducted. The respondent was known to the interviewers due to collaboration of past project and a four-month internship. As mentioned above, this research interview is a semi-structured interview. This provides an interview guide with a few open-ended questions which can lead to an open discussion regarding the field of research (Kvale &

Brinkmann, 2014). Another important aspect to prepare for as a researcher, when doing a research interview, is the preparation toward the respondent. For this interview, an elite interview has been chosen as the respondent possesses a powerful position in the field of research (Kvale & Brinkmann, 2014). The elite interview requires the interviewer to be well prepared and able to master the academic language as well as being educated in the research topic. This will provide the research interview with symmetry and can produce high validity and reliability in the obtained information (Kvale & Brinkmann, 2014). The interviewers have been studying the field of research. This has led to a thematic literature review and a priori framework which is the foundation for the interview. The research interview was conducted by Jens Fogh Randbæk Jensen (JF) Andreas Mendys (AM) and the respondent Thomas Kristiansen (TK). Furthermore, the research interview was conducted and recorded on Microsoft teams due to a physical interview not being available because of the Covid-19 pandemic. The language used are Danish which is the native language for all participants of the interview and was chosen to gain the best understanding of the research field.

4.4.1.4 Transcript

The transcription of an interview is the task to make spoken language from a conversation into a written text (Kvale & Brinkmann, 2014). When a researcher is producing spoken language from a conversation into a written text, the oral discourse can be changed or lost (Kvale & Brinkmann, 2014). To provide the best understanding for the reader, this need to be emphasized along with the chosen transcription method and its characteristics. According to Kvale & Brinkmann (2014) there is no correct answer to transcribe an interview. For this research interview, the transcription is translated from the spoken language into English. The transcription does not include any body language, movements, or emotional expressions. Furthermore, the transcription is written in a formal language with the goal of providing clear written answers from the respondent to further use in the analysis of the master thesis. The transcription does only include passages used in the analysis and have been

verified by the respondent for interpretations from the interviewers. This is due to some of the interview being classified information's and the high technological level of topic which can lead to misinterpretations when discussed.

4.4.1.5 Analysis

When analyzing a research interview, a researcher can approach this from different angles in which all serve different purposes (Kvale & Brinkmann, 2014). This master thesis has used the narrative analyzation to analyze the semi structured interview. The reasoning for this, is to analyze the meaning and linguistics of the interview (Kvale and Brinkmann, 2014).

4.4.1.6 Verification

Kvale and Brinkmann (2014) defines the verification process of an interview as a determination of the reliability and validity. Kvale and Brinkmann (2014) states that the reliability is likelihood of the interview to be reproduced by other researchers in the future and end with the same result. The reliability within qualitative interviews can be challenged due to the nature of the interview format. Additionally, seeking high reliability in a semi structured interview can be an obstacle and decrease the creativity in the interview (Kvale & Brinkmann, 2014). Transcription in qualitative interviews have the same challenges since different researchers will transcribe the same interview in different ways. The reliability of this semi structured interview has been challenged by not including the full transcript. However, the used passages from the respondent been approved for interviewer's interpretation. Kvale and Brinkmann (2014) defines validity as the researcher's plausibility and quality of their work. This also includes the researcher's ethics and integrity (Kvale and Brinkmann, 2014). The validity is an integrated part of the whole project and should therefore not be limited to one separate section (Kvale & Brinkmann, 2014).

4.4.1.7 Report

Reporting a qualitative research interview does not have a set of rules. This is due to the nature of social construction of qualitative interview (Kvale & Brinkmann, 2014). In this master thesis, this qualitative research interview has been based upon the findings in the thematic literature review, problem formulation and research questions. Furthermore, it have been the breeding ground for the conducted e-mail interviews. The available transcription can be viewed in appendixE**)??**, and will be referred to as Kristiansen (2021). The full transcript can be provided upon request to the researchers.

4.4.2 E-mail interview

Technologies have provided researchers with new ways of conducting qualitative research interviews such as the computer supported interview (Kvale & Brinkmann, 2014). One of the most common computer supported interview is e-mail interview. This interview form has the advantages of gathering large amount of empirical data quickly and be self-transcribing, which means the text is ready to be analyzed when received (Kvale & Brinkmann, 2014). E-mail interview does however have some limitations which the researcher needs to be aware of. Firstly, the interview form is often asynchronous, however it does provide the respondents with flexibility to answer the questions when they have time available. This does require that both the respondent and the interviewer are relatively capable of the written format since no body language etc. is available. These criteria have been met with the respondents.

This format has been chosen due to the high flexibility it provides the respondents. The e-mail interview conducted in this master thesis are with Line Lehman, legal consultant at Freeway ApS and Rasmus Olsen, SEO specialist at Freeway ApS. Additionally, two e-mail interviews with Michael Sweeney, Head of Marketing in Clearcode, Jan Skov COO in Raptor Services have been conducted. The respondents have each been asked four to six questions and in the interviews with Michael Sweeney and Jan Skov, follow-up questions have been asked. All the respondents have been briefed about the key findings in the literature review as well as the problem formulation and research questions. The full transcript of the e-mail interview can be viewed in the appendix.

4.4.3 Survey

Quantitative data collection is often used in business research and is often used successfully with other methods in a multiple method research design (Saunders et al., 2018). Survey is an often-used method and are categorized methodically either as self-completed questionnaire or interviewer-completed questionnaire. The choice is decided by the individual project and its research questions. This project has made use of the self-completed questionnaire, which is shared via social media. The research's purpose is to see how consumer expectations align with the changes the implementation of Google Privacy Sandbox brings to Danish SMEs. Sharing via social media ensures that we reach respondents who are influenced by essential elements that Google Privacy Sandbox will influence. The survey is supposed to ensures us an efficient and large dataset that can be used for further quantitative analysis. Further, Saunders et al. (2018) also points out that this method gives the respondent the best conditions to respond at an appropriate time. One of the disadvantages of this method is the lack of interaction with the interviewer, which mean the thoughts of the respondent will not be taken into account. The survey should therefore be developed simply and comprehensible to achieve the best results (Saunders et al., 2018).

4.4.3.1 Objective of the survey

Before preparing the survey, it is important to have defined objective. The goal of this survey is to investigate whether consumer expectations are met with the implementation of Google Privacy Sandbox. The results are expected to provide answers as to whether the elimination of third-party cookies and what it entails is align with the consumer expectations among respondents. With the inclusion of the respondent’s opinions the survey provide the interest of an additional stakeholder. This provide a different perspective than from Danish SMEs, however, it’s important to notice that the survey only showcases a trend among the respondent, to which expectations dominates. It cannot

provide the same detailed answers as an interview is capable of, but it outlines the trend in the answers of the respondents.

4.4.3.2 Questions

When developing questions, Saunders et al. (2018) points out the importance of making the questions understandable according to the population. At the same time, it is important that the questions are defined before the data collection as there is no possibility of follow-up or adjustments like in the research interview which is also used in this master thesis. The questions can be either closed-ended, open-ended or a combination thereof. In this survey, only closed-ended questions have been used as they can be analyzed quantitatively. In addition, Saunders et al. (2018) also points out closed-ended questions increase the likelihood of higher response rates. The questions have been identified from previous analysis, where various experts have commented on Google Privacy Sandbox's importance and impact on the internet technologies used today among SMEs. Based on the demands Google Privacy Sandbox places on Danish SMEs, we have formed the questions for the survey to see if these match the consumer's perception of an improved customer experience. The questions are designed so that the respondent is guided through the survey with one question at a time. In this way, we ensure that the individual questions has the respondent's focus. As the survey is short (4-6 minutes) we initially did not find it necessary to have additional incentives, however this could have improved the number of respondents participating in the survey. As the subject is technically heavy, the researcher has tried to create questions that are easily manageable. At the same time, the survey is designed so that the respondent starts by providing basic information about himself or herself. This is often an important part of the survey, as the respondent indicates which group they belong to. This is not all crucial in this survey, as the research objective do not want to pit two groups against each other.

Surveyxact has been used for the development of the survey. This software is freely available to students at Aalborg University, and at the same time provides opportunities to analyze the collected

data. To create the best possible survey, we tested it before it was shared. Here we have used acquaintances who often use the web, but do not necessarily have the great technical knowledge regarding Google Privacy Sandbox. The test is necessary to avoid misunderstandings or problems with the survey's design (Saunders et al., 2018). At the same time, we asked the test persons to look for typos as well as take time on the survey. The survey was then adjusted according to the recommendations of the test persons.

4.4.3.3 Data collection

Methodological non-probability sampling has been used (Saunder et al., 2018). This means that not everyone within the population has had the opportunity to participate in the survey. Due to this there is also a greater chance of sample bias (Saunder et al., 2018). At the same time, this means that the conclusions formed on the basis of survey are not as strong as in probability sampling. Since it is an exploratory research, and the purpose is not to test hypotheses this is approved. The purpose of the survey is to develop an understanding of the population affected by the elimination of Third-party cookies and the implementation of Google Privacy Sandbox.

The survey is shared on Facebook and Linkedin. The purpose of this is to target people who use these platforms and are thereby influenced by the research topic. The platforms on which the survey is shared make up a larges potential reach. It is, of course, unrealistic that everyone should have access to this particular study, as these are platforms used by the entire world's population. It also means that an exact number that the study has reached is impossible to flesh out. The survey has been available for 10 days. By the end of the survey, the survey had received responses from 64 respondents. Of these, 58 had completed the survey to the end. At the same time, this means that 4 did not answer all questions and thus did not complete the survey. In this perspective it is important to note that the conducted survey include respondents which mainly are males (72 percent) in the age of 17-50 (60 percent) with an income less than DKK 16.000 (50 percent). Due to the platforms where the survey

have been shared this indicates that the sample is mainly students and are a reflection of the researchers network. This can have an impact on the respondent's answers, and a different sample size could have provided different answers.

5 Analysis

This section examines the research questions, which are presented in the beginning of each analysis. The analysis has its breeding ground in the thematic literature review and is based upon the collected empirical data. The analysis consists of three parts divided by the research questions. The findings from research question 1 leads to the analysis of research question 2. The findings from research question 2 will then be examined in research question 3 from the view of the consumer as a stakeholder.

5.1 Research question 1

How can a digital innovation of an online big MNE, such as Google Privacy Sandbox, affect e-CRM of Danish SMEs in e-commerce?

Past literature and studies suggest that the transparency of the internet can provide both the marketers and customers with untold opportunities (Porter, 2001 and Reichfeld & Schefter, 2000 cited in Lam et al., 2013). This is aligned with Kristiansen's view of digital marketing.

> *"The essence of marketing is to provide the right message to the right person at the right time."*
>
> (Kristiansen 2021).

The internet has provided marketers with the opportunity to track consumers and their tendencies across the web. This has led to an improved and more precise marketing effort in which can be thoroughly analyzed. In addition, literature has shown that SMEs often simply use internet technologies to facilitate the management of customer relationships (Lam et al., 2013). Few SMEs use complex software or strategies, but instead they often use available internet technologies intuitively (Peltier et al., 2009; Street & Cameron, 2007; Zontanos & Anderson, 2004 Cited in Harrigan et al., 2012). The reasoning for using e-CRM is that an improved relationship between the

company and customer often leads to cost reduction in marketing and sales, revenue enhancement and increased customer lifetime value (Emciuc et al., 2019 cited in Emciuc et al., 2020; Porter, 2001 and Reichfeld & Schefter, 2000 cited in Lam et al., 2013). Furthermore Fairhurst (2001) and Emciuc (2020) elaborates that the most important benefits of e-CRM is customer profiling through quick data mining, enables automation of a large part of the customer related activities and delivers better targeted products and services etc. The transparency and the positive effects of e-CRM for Danish SMEs can be challenged with the implementation of Google Privacy Sandbox in 2022. Though Google Privacy Sandbox is still in the early stages of development, the project does indicate some significant changes with the elimination of third-party cookies.

Olesen (2021) argues that all ten e-CRM commandments presented in figure 2 will be negatively affected by the implementation of Google Privacy Sandbox. It is not defined completely to which degree each of the ten e-CRM commandments will be affected due to the collection of First-party data still being available. However, Olesen (2021) do highlight commandment five and nine to be most negatively impacted, which is the use of website to gather information on customers and the usage of information in database to identify customer trends to sell more.

Within the AdTech industry, there is a general concern for the end of third-party cookies.

"Google's Privacy Sandbox means the future will look a lot different than the past and present."

Sweeney (2021)

As Michael Sweeney states, the AdTech industry will see significant changes with the implementation of Google Privacy Sandbox. The reasoning for this, is that the elimination of third-party cookies will have an impact on their business because there will be much less data to collect and use. This is especially the case for companies who uses data management platforms (Sweeney, 2021b). Sweeney further argues that many AdTech and data companies will need to change their

business model and tech to adapt to this new world. For instance, remarketing companies which uses demand-side platforms will likely not be viable and would be shifted to the TURTOLEDOVE standards of Google Privacy Sandbox (Sweeney, 2021b).

"Many AdTech and data companies will need to change their business model and tech to adapt to this new world"

(Sweeney, 2021b)

However, some AdTech companies will not be affected much the implementation of Google Privacy Sandbox. Jan Skov, COO of Raptor Services who are software development company in the advertising and marketing technologies industry, states that Google Privacy Sandbox will have an insignificant effect on their services (Skov, 2020). The reasoning for this, is that the company can provide its personalization and experience optimization solutions through mainly First-part data such as first- part cookies, e-mail, user-logins, customer club ID, Payment card-tokens etc. (Skov, 2020). Kristiansen (2021) states that the sharpened cookie regulations have decreased the data flow with an estimated 20-40%. The result of this is that the marketing team are operating with notable blind spots.

"We can see our revenue streams increase but we can not analyze what effort cause it. Whether it was from Google, Facebook, Instagram etc".

Kristiansen (2021)

With the implementation of Google Privacy Sandbox this effect will further be increased since all third-party data will be eliminated. The solution to this problem is widely discussed at the Chromium with various suggestions to TURTLEDOVE on how the data flow will be shared from the FLoC. Kristiansen (2021) is not overly concerned with the future since there is too much at stake in the industry if an adequate solution is not found. An effect of this is the possibility of Walled-Gardens.

"The interests of large companies, such as Google, with direct access to a large amount of personal data are aligned with this aspect of data protection: restricting the flow of data may increase these companies' advantage over competing intermediaries "

(CMA, 2020).

CMA is currently investigating these trends and whether Walled-Gardens with a possible oligopoly is developing (CMA, 2020). Both Skov (2021) and Sweeney (2021) have expressed similar concerns regarding this issue.

Kristiansen (2020) argues that the cookie law has had reverse effect regarding competitiveness. The law gives more power to Google and Facebook as they already have large ecosystems that allow to collect data without third-party cookies. This can make it even harder for SMEs to be competitive and the effect can be further enhanced with Google Privacy Sandbox and the potential Walled-Gardens. Another potential effect of the Google Privacy Sandbox is that Danish SMEs will might not be able to use their collected first-party data to power the FLoC. Sweeney (2021) argues that it can be challenging to use the collected first-party data to power the FLoC.

"The reason I say that is because FLoC will remove the decisioning processes away from websites/publishers and AdTech companies and towards Chrome. There won't be much control and transparency over how these cohorts (i.e. audiences) are created"

(Sweeney 2021)

However, the AdTech industry can likely provide a solution to this. Skov (2021) states that Raptor Services will work towards an integration to solve this potential issue.

5.1.1 Partial conclusion

For Danish SMEs, Google Privacy Sandbox can firstly affect the available internet technologies, which is widely used for e-CRM. Secondly, the ten commandments of e-CRM will to some extend be affected with commandment five and nine as the most challenged. A derived effect of this, is that without any third-part data, the first-part data becomes more significant to SMEs competitiveness in e-commerce. Arguments can be made that the essence of marketing will be challenged with the increased blind spots in the data. For some AdTech's, their basis of existence will be affected with the implementation of Google Privacy Sandbox and a change in their business model is necessary. Lastly, Google Privacy Sandbox can cause a potential oligopoly with Walled-Gardens which can affect e-CRM for Danish SMEs in e-commerce.

5.1.2 Coding table research question 1

Interviewee	Quote	Understanding of Quote	Code	Themes
TK	The essence of marketing is to provide the right message to the right person at the right time.	Definition of modern marketing and why he likes his field of work.	Essence of marketing	Personalization
MS	Google's Privacy Sandbox means the future will look a lot different than the past and present.	Google Privacy Sandbox leads to an unpredictable future.	Data blind spots	Lack of clarity within data
MS	Many AdTech and data companies will need to change their business model and tech to adapt to this new world	AdTechs basic of existence will be challenge due to centralization of data.	Data centralization	Potential Walled Gardens
TK	We can see our revenue streams increase but we can not analyze what effort cause it. Whether it was from Google, Facebook, Instagram etc.	Frustration with the lack of transparency regarding his marketing efforts.	Data blind spots	Lack of clarity within data
MS	The reason I say that is because FLoC will remove the decisioning processes away from websites/publishers and AdTech companies and towards Chrome. There won't be much control and transparency over how these cohorts (i.e. audiences) are created	There is no official solution to power the FLoC with First-party data, since there will not be transparency and control over the cohorts.	Data centralization	Potential Walled Gardens
JS	Google Privacy Sandbox will have an insignificant effect on our services	Raptor Services is based on First-part data, why Google Privacy Sandbox will not have a big impact.	First-part data	First-part data is important
RO	highlight commandment five and nine to be most negatively impacted	To some extend all commandments are negatively impacted by Google Privacy Sandbox, but five and nine is impacted the most.	Less data flow	Less data across websites

5.2 Research question 2

What will the innovation of Google Privacy Sandbox require from Danish SMEs in e-commerce?

As stated in research question 1, there are numerous possible effects of Google Privacy Sandbox. The requirements of these effects will be analyzed in this section.

The EU GDPR was deemed by researchers to be the biggest threat to business for a decade. Additionally, it is also comprehensive, and it is suggested for companies in EU to hire a Data Protections Officer (DPO) (Kolah et al., 2015; Art 37 GDPR). With change in data flow such as Google Privacy Sandbox and a greater focus on privacy, it indicates that Danish SMEs must prepare both legal and strategic to stay competitive. Olsen (2021) points out the importance of having an established IT department that can handle the implementation of Google Privacy Sandbox without losing important steps in the competition. At the same time, Olsen (2021) also argues that his work is made more difficult. The tightened cookie legislation has already blinded him on some points, however, with the possibility of drawing the essential numbers that he needs. This indicates that with the implementation of Google Privacy Sandbox, his data will consist more of first-party data. Olsen (2021) also points out that with the identification of the individual user, it will be possible to implement a data collection that can compensate for the lost data volume in Google Analytics. This suggests that much of the work Olsen (2021) is doing through Google Analytics should be replaced by other Internet technologies. In addition, he says:

> *In the future, the analysis work will (maybe) be carried out exclusively through Search Console, rank tracking and tools such as Ahrefs and Semrush. Companies with their own developers must customize websites to track the user's journey across the site. This may be possible using query strings etc.*
>
> (Olsen, 2021).

The replacement of already functioning internet technologies also worries Kristiansen (2021), who points out that the company's performance may deteriorate for a period. Mailchimp is an example of an e-CRM tool that has not yet adapted to EU privacy law. If it does not change relatively quickly, it will be necessary to change to another software. It is a good example where current automated processes are made more difficult and with the implementation of Google Privacy Sandbox, there will only be more examples like this. At the same time, Kristiansen (2021) is also concerned about the data he can expect to lose. In this regard he quotes John Wanamaker:

"Half the money spend on advertising is wasted; the trouble is I don't know which half"

(Kristiansen, 2021)

This is an interesting opinion from Kristiansen (2021). Before the Internet set the standard for marketing, marketing was often used blindly. You used a lot of different ads but couldn't pinpoint which ones generated more revenue. With the internet's implementation and digital development, it enabled the technology of extensive tracking that has characterized marketing ever since. Now marketing is in a situation where we can get back to putting a sign on the side of the road and hoping for the best. However, Kristiansen (2021) also acknowledges that marketing comes back in cleaner form, where the marketing characteristics themselves become more important. Skov (2021) also points out that the elimination of third-party cookies forces companies to work seriously with first-party data, as well as the process of using it to create a personalized experience. Olsen (2021) agrees with this and states the following:

In addition, all sites should - where possible and logically - work towards logging users in and thereby gain acceptance to log data server side and get the user to

provide more information themselves. It is not impossible to continue to obtain data, it just will not be to the same extent as in the past.

(Olsen, 2021).

This suggests that first-party data in the future will be essential for successful e-commerce, however it is currently not known whether it can be used to power the FLoC (Sweeney, 2021b). This indicates that Danish SMEs might not be able to utilize own First-party data to power the FLoC. Nonetheless, Skov (2021) states that Raptor Services will work towards an integration which can enable this.

GDPR have already made the internet flooded with consent obtaining steps (Menon, 2019). Google Privacy Sandbox will likely further increase this for first-party cookies. A requirement for Danish SMEs, is to not only prepare for working serious with the collecting of first-party data but also be creative. An example of this is Jaguar Land-Rover who consider making a tradeoff with their customers for their data (Reuters, 2019).

Sweeney (2021) says on behalf of Clearcode that the elimination of third-party cookies does not interrupt too much as they do not show ads across websites. However, he believes it will have a negative effect on their conversions, however, since they often only show ads on Google Search and Linkedin, the elimination will not mean much, as the focus is on cross-site advertising. Sweeney (2021) adds further:

Our biggest channel for lead generation and brand awareness is search engine optimization (SEO), which is conducted on a first-party basis rather than a third-party basis, meaning our web analytics tools will still collect web analytics data because it's collected and stored using first-party cookies, which won't be impacted by the elimination of third-party cookies.

(Sweeney, 2021b).

This is an example of the measures Olsen (2021) mentioned could become a reality with the elimination of third-party cookies. At the same time, it indicates that SMEs generally need a dedicated SEO expert, as you cannot necessarily see what the money you spend is giving back. Sweeney (2021) further points out that while Google's AdTech products are also affected by the elimination of third-party cookies, they will still have many valuable first-party data for Google Search and YouTube. He adds:

> *Advertisers may see more value in reaching their audiences via Google Search (i.e. Google Ads) and YouTube rather than via Privacy Sandbox, which will increase Google's ad revenue.*
>
> (Sweeney, 2021b)

The change in the AdTech industry also means that many of the solutions that exist are no longer viable. Already when the GDPR was implemented, there was an increase in ad revenue in Walled Gardens (Facebook and Google) as fewer advertisers were campaigning on the open internet (Sweeney, 2021b). Google Privacy Sandbox can therefore increase the price of data driven advertisement since the competition will be centralized into a few Walled-Gardens. Danish SMEs should be prepared for such increased competition on data-driven advertisement but also consider that data-driven is worth three times more as non-data driven advertisements (New York Magazine, 2018 cited in, Menon 2019). With the elimination of third-party cookies, there is tendencies towards first-party data will be the key to success in a more privacy-focused world and Sweeney (2021b) does not think Google is going to be lacking on that front.

When established that the collecting of first-party cookies is essential for the future competitiveness of Danish SMEs, the current and future legal aspect of first-party cookies entails the companies for certain requirements.

Lehmann (2021) says that GDPR and cookie legislation have complicated work processes for SMEs. She argues that with the big changes going on regarding privacy, it can be difficult to comply without having a lawyer employed (Lehmann, 2021). One of the reasons for this, according to Lehmann (2021), is that the rules are not proportional to reality and the actual need for protection. This view is shared by Kristiansen (2021), who believes it is clear that cookie legislation does not bear the hallmarks of people working in the field. Kristiansen (2021) and Lehmann (2021) both point out statistical cookies in this respect, which should not be affected by the legislation.

"Pure analysis cookies should be exempt from the law. Cookies used for pure statistics and analysis of a website's performance should thus be exempted from the consent rule"

(Lehmann, 2021).

The European Union is trying to change the law to suit reality. The intention is that pure analysis cookies should not be covered by the law. In their attempt to correct this, the EU has chosen to replace the ePrivacy Directive of 2002, on which the current Danish Cookie Order is based, with the data protection regulation, known as ePR. The regulation is not expected to apply until 2023, and companies currently affected by this legislation should not expect any change anytime soon (Lehman, 2021). Further, Lehmann (2021) points out that the proposal only deals with first-party cookies and thus it is not certain that third-party analytics tools such as Google Analytics will benefit from this. She further argues that this is an ongoing process which can be continually extended due to changes in the directives (Lehmann, 2021). It can therefore be difficult as a Danish SME to comply with and interpret the different legislations, especially when working at both national and EU level. However, only a few cases of lawsuit have been filed in Denmark (Villadsen, 2021). The same tendencies have been the case in Ireland.

Irish Data Protection Commissioner (DPC) acknowledged that despite reporting more than 10,000 complaints in 2020, the DPC only plans six to seven formal decisions in 2021. This means that only 0.07% of all GDPR complaints might possibly see a formal decision.

(Sweeney, 2021b).

In addition, as mentioned above, it is an ongoing process. Therefore, you cannot just fix it and put it aside, it requires the full attention of the company. A successful implementation of a project can be quickly changed with new guidelines from the EU or the Danish Data Protection Agency. Therefore, Lehman (2021) also assesses that SMEs that rely on personal data and have not hired a lawyer should invest in an IT system or some AI that can do the work for you, knowing that it is extremely burdensome for the company.

5.2.1 Partial conclusion

Danish SMEs are required to have an established IT department in order to have a successful implementation of Google Privacy Sandbox. This in regard both to the ongoing legislations and stay competitive with the elimination of third-party cookies. Additionally, this elimination will also require some of the automated processes to be updated. Danish SMEs are also required to increase their efforts collecting and utilizing first-party data in order to stay competitive. To some extend it may be required to work creative in this process and include trade-offs to obtain valuable data, due to the increased competition for first-party data. Google Privacy Sandbox will cause blind spots in the collection of data, which will require SMEs to use data experts. Furthermore, developers should also customize websites to track the user's journey across the site. Lastly Danish SMEs should also prepare for either purchasing or developing solutions to utilize their First-part data to power the FLoC.

5.2.2 Coding table research question 2

Interviewee	Quote	Understanding of Quote	Code	Themes
RO	Points out the importance of having an established IT department that can handle the implementation of Google Privacy Sandbox without losing important steps in the competition	It becomes more important to have an established it-department	Establish IT department.	Lack of clarity within data
RO	*In the future, the analysis work will (maybe) be carried out exclusively through Search Console, rank tracking and tools such as Ahrefs and Semrush. Companies with their own developers must customize websites to track the user's journey across the site. This may be possible using query strings etc.*	Companies will be more reliant on First-part data, competent developers and data experts	Collect First-part data	Less data across websites
TK	*Half the money spend on advertising is wasted; the trouble is I don't know which half*	Due to lack of transparency, it is not possible to locate which marketing efforts create value. At the same time, it's an example of how marketing can not only be slowed down but can actually end up being put back.	Track user journey	Lack of clarity within data
RO	*In addition, all sites should – where possible and logically – work towards logging users in and thereby gain acceptance to log data server side and get the user to provide more information themselves. It is not impossible to continue to obtain data, it just will not be to the same extent as in the past.*	Logging in consumers will be essential to collect First-part data.	Track user journey	Acceptance of information gathering
MS	*Our biggest channel for lead generation and brand awareness is search engine optimization (SEO), which is conducted on a first-party basis*	Clearcode are capable of utilizing mainly First-part data in their SEO and create lead generation and brand awareness.	Collect First-part data	Successful information gathering

	rather than a third-party basis, meaning our web analytics tools will still collect web analytics data because it's collected and stored using first-party cookies, which won't be impacted by the elimination of third-party cookies			without third-party data
MS	*Advertisers may see more value in reaching their audiences via Google Search (i.e. Google Ads) and YouTube rather than via Privacy Sandbox, which will increase Google's ad revenue.*	Google transfer more power towards themselves, which might increase their ad revenue.	Data centralization	Potential Walled Garden
TK	It is clear that cookie legislation does not bear the hallmarks of people working in the field	The people in EU didn't think of the consequences when they implemented the cookie legislation	Ongoing changes in legislations	Potential Walled Garden
LL	Pure analysis cookies should be exempt from the law. Cookies used for pure statistics and analysis of a website's performance should thus be exempted from the consent rule	Performance cookies shouldn't be a part of the cookie legislations in the first place.	Ongoing changes in legislation	Ready to adapt
MS	*Irish Data Protection Commissioner (DPC) acknowledged that despite reporting more than 10,000 complaints in 2020, the DPC only plans six to seven formal decisions in 2021. This means that only 0.07% of all GDPR* complaints might possibly see a formal decision.	I many cases there is no formal decisions	Ongoing changes in legislations	Ready to adapt

5.3 Research question 3

Are such innovations led changes in e-CRM aligned with customer expectations in enhancing e-CRM by Danish SMEs in e-commerce?

From the findings a Readiness checklist is developed:

1. Establish an IT-Department or external service for the implementation of Google Privacy Sandbox
2. Prepare for the ongoing changes in GDPR and cookie legislation.
3. Prepare for changes in automated processes.
4. Increased effort by data or SEO expert on collecting and utilizing first-party data.
5. Include trade-offs to obtain valuable first-party data.
6. Developers should customize websites to track the user's journey across the site.
7. Purchase or develop solutions to utilize their first-part data to power the FLoC.

Within the readiness checklist, the main topic for customer expectations are the collection and utilization of first-party data. This involves point 2-7 as the customer expectation can affect how aggressively a Danish SME should approach this. 57 percent of the respondents have answered that they use the internet either sometimes or often for e-commerce. This indicates that to some extend their opinion regarding cookies have relevance for Danish SMEs. In regard to online privacy, 52 percent do worry about it whereas 24 percent neither agree nor disagree. This correspond with 46 percent of the respondents answered that they do understand what accepting cookies entails. However, only 30 percent have answered that they actively read about how to protect their privacy online and additionally 91 percent do not read what cookie declarations actually comprehend. An interesting point is that only 9 percent of the respondents do read cookie declarations, which is a bit low compared to the 46 percent who answered they understand what an accept of cookie entails. This provide strong tendencies that the respondents worries and understand what cookies entails, but do

rarely read if a website complies with the regulations and what cookies they accept. For Danish SMEs, it is the Danish Business Authority who makes sure companies complies to the cookie regulations. However, it also their job to ensure that it is simple and attractive to conduct responsible business in Denmark. This might be the reason why there currently haven't been many formal decisions in Denmark (Kristiansen, 2021). Additionally, this has been the same case in Ireland where the Irish Data Protection Commissioner (DPC) acknowledged that despite reporting more than 10,000 complaints in 2020, the DPC only plans six to seven formal decisions in 2021 (Sweeney, 2021b). Kristiansen (2021) argues that competitiveness to some extend is not fair, when competitors can speculate in not complying with the cookie regulations without any risk. Arguments can be made that Danish SMEs successfully can speculate in not complying with the cookie regulations to gain a competitive advantage.

Looking at the respondents, it is around 50 percent who accept cookies whereas 41 percent always do. This corresponds with Kristiansen (2021) statement from the interview, where he estimates Freeway ApS to have lost around 20-40 percent of their data with the sharpened cookie regulations.

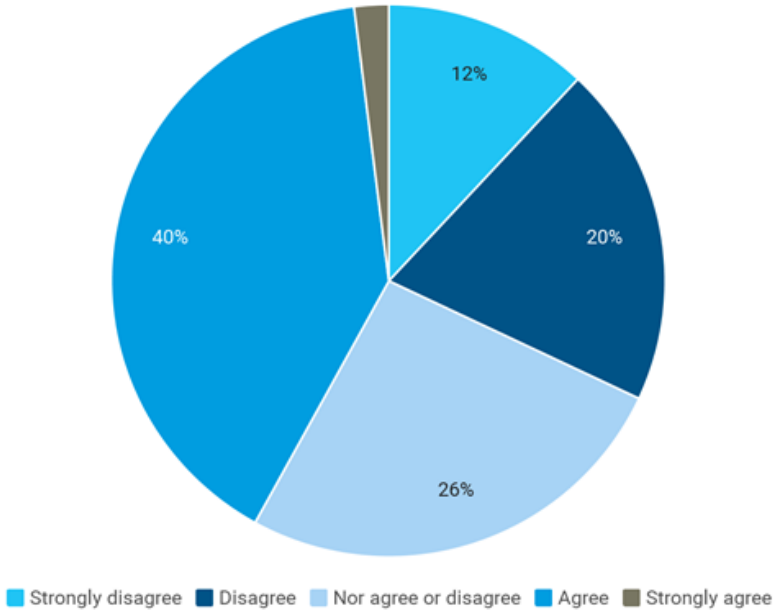

Figure 7 -I will accept a likely increase in collection of first party data such as e-mail verfication, user logins, Customer Club id etc.

As illustrated in figure 7, the likelihood that the respondents will accept an increased flood of consent obtaining on the internet for first-party data is initially not that concerning. 42 percent will accept a likely increase in collection of First-party data and to some extend will some of the 26 percent who have answered neither agree nor disagree. However around 32 percent disagree that they will accept a likely increase in collecting first-party data, which emphasizes the importance of being creative and make tradeoffs (Olsen, 2021; Skov, 2021; Reuters, 2019). The importance is further highlighted as the survey shows that 54 percent of respondents see value in full online anonymization and 44 percent see value in a personal customer journey when browsing the internet. Pitted against each other, 60 percent of the respondents rate that online anonymity is more important than a personal customer journey when browsing the Internet. This may indicate that those who will not accept the collection of first-party cookies also value anonymization highly, why it may be difficult to convince them to let their data be collected. Since the majority of the respondents' value anonymization above customer experience, a tradeoff might be favorable to obtain their data compared to only providing an improved customer experience.

In the analysis of Google Privacy Sandbox, walled gardens are a major concern among the professionals who have a critical view of the project. In the survey, respondents have been asked whether they see value in being anonymous even if it causes their data to be centralized as illustrated in figure 8.

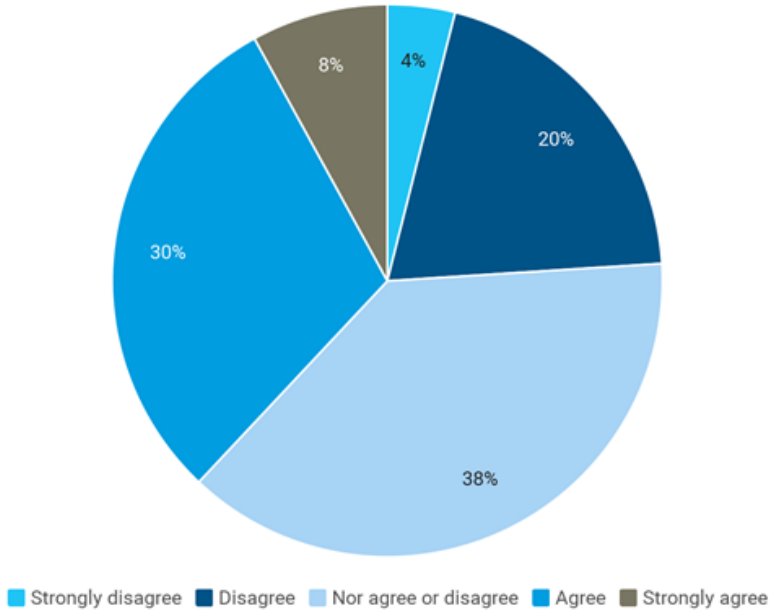

Figure 8 - I value anonymization, even if it leads to centralization of personal data (own creation)

38 percent see anonymization important despite the fact that it will lead to a centralization of data and 38 percent nor agree or disagree. This suggests that data centralization does not worry respondents to the same extent as it worries the professional people working in the field. This does makes sense because the respondent won't be affected the same way. However, it also indicates that Danish SMEs should be aware for potential Walled Gardens since the respondents will likely accept it. Similarly, questions have been asked as to whether respondents are concerned about potential walled gardens. 40 percent are concerned and 42 percent neither agree nor disagree. It indicates respondents seeing great value in anonymization, even if it leads to data centralization. A data centralization could potentially cause Walled Gardens, which also worries respondents but not to the same extend. They give greater weight to their anonymity.

5.3.1 Partial conclusion

For Danish SMEs, the changes in e-CRM from Google Privacy Sandbox do align with customer expectations as it increase the anonymity of the individual when browsing the Internet. The readiness checklist produced for Danish SMEs have seven requirements in which an organization can prepare themselves for Google Privacy Sandbox. One of the most notable customer expectations, is the willingness to accept an increase in consent obtaining on the internet for first-party data. Below half of the respondents are likely to accept this. Furthermore, 54 percent of the respondents do see the value in complete online anonymization which increase the arguments for companies to consider work creative and include tradeoff to gain first-part data in the future in order to not become fully blinded in their marketing efforts. Additionally, the respondents answers make argument for Danish SMEs to prepare themselves for potential Walled-Garden as the tendencies are they would accept that solution.

6 Discussion

This master thesis was set out to investigate how Google Privacy Sandbox will impact e-CRM of Danish SMEs in e-commerce. There have not been any available scientific papers on this topic or how Danish SMEs can prepare for this possible change in digital marketing. The literature we have used have been on GDPR which brought similar change to digital marketing, e-CRM and lastly the literature available to Google Privacy Sandbox this early in the development of the project. The literature review brought a priori framework which can be seen in figure 3. The analysis of this master thesis was based upon a single case study with Freeway ApS with additional empirical data from relevant experts in the field. The posteriory framework of the master thesis is illustrated in figure 9.

The discussion if this master thesis is split into three sections. Firstly, will the relevancy and applicability of the readiness checklist be debated. Secondly, the ethical of the current state within digital marketing with the extensive sharing of personal data throughout Third-party cookies will be discussed. Lastly, the possible ethical implications of possible walled gardens such as Google Privacy will be debated.

6.1 Posteriory framework

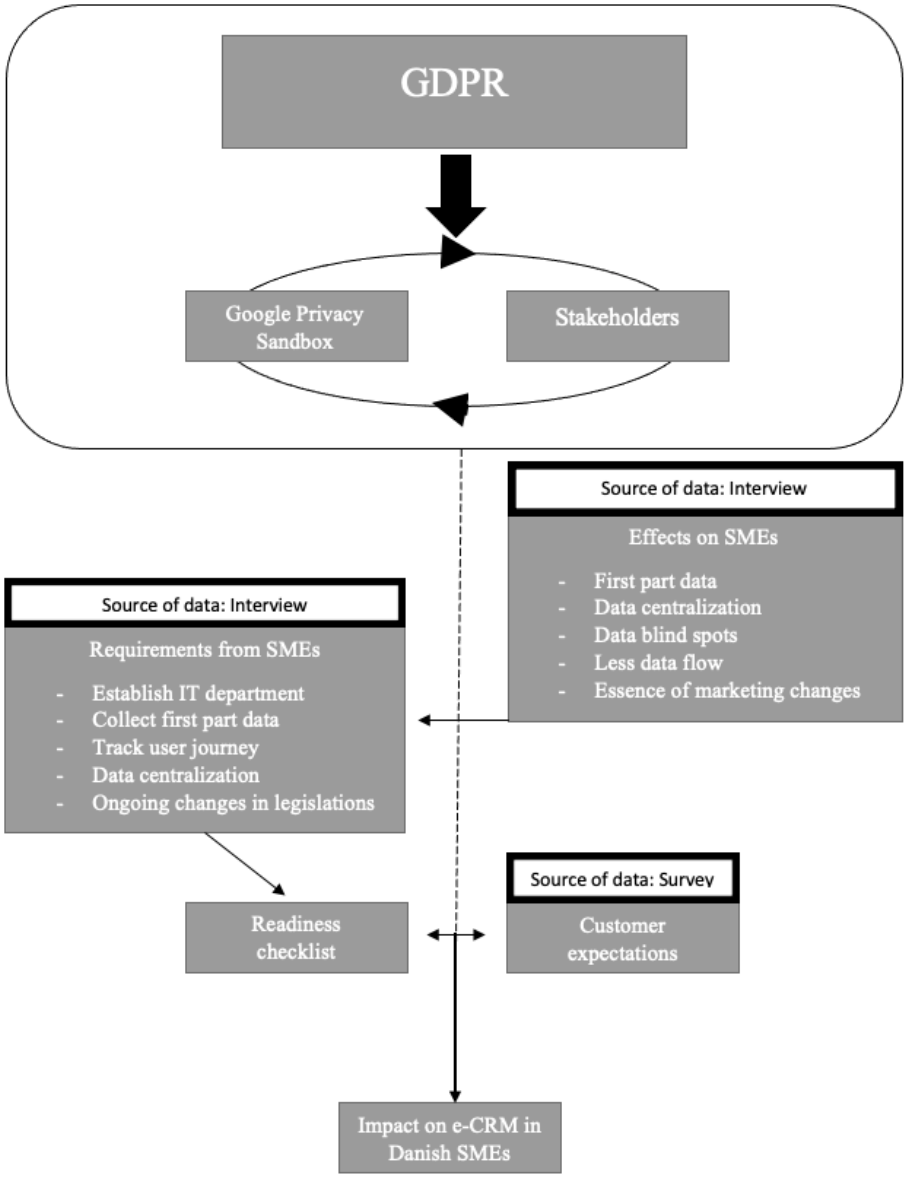

Figure 9 - Posteriory framework (own creation)

6.2 The applicability of the readiness checklist

The readiness checklist has been developed with the purpose of giving Danish SMEs a list of requirements to prepare for Google Privacy Sandbox. Arguments can be made that since Google privacy Sandbox is still in a development stage, not all efforts in the list shares the same relevance. Changes to the project from Google developers can arguably prevent point 1,3 and 7 from being necessary. Additionally, most of the list require a lot of recourses from SMEs in terms of investments and man hours within a long-time span to implement fully. This can further strengthen the arguments for Danish SMEs to invest cautiously in the preparation for the implementation of Google Privacy Sandbox. The arguments in favor of the readiness checklist are firstly, that the list have been developed from empirical data from experts within the field and relevant scientific literature. Secondly, the list is developed with requirements that address the effects of the core implementation of Google Privacy Sandbox and thus not the areas which has seen multiple suggestions from different stakeholders. Lastly the requirements has been analyzed in term of Danish consumers expectations towards privacy.

6.3 The ethical implications of the current state in digital marketing with the extensive sharing of personal data throughout Third-party cookies

In the interviews for the data collection, all five respondents were asked about their opinion on Third-party cookies in both a professional and a private perspective. This has been included to give the most diverse discussion regarding the topic.

The use of third-party cookies for ad targeting and personalization has been a very opaque and secretive process (Sweeney, 2021b). The online advertising industry never took user privacy into consideration when it started using third-party cookies for identification and that's why we're in the position we are now. Governments, web browsers, and tech companies like Apple have had to step

in and introduce changes to increase user privacy because the online advertising industry didn't do it itself. (Sweeney, 2021b).

I'm looking forward to a world without third-party cookies as it will mean that user privacy will be at the forefront of online advertising, which it should have been from the start.

(Sweeney, 2021b).

Skov (2021) agrees with Sweeney and states that believe that the current usage of third-party cookies post a risk to consumers privacy and further argues that he finds it difficult as both as a private person and a professional working in the business to view the value of third-party cookies. Olsen (2021) value the improved customer experience the sharing of third-party cookies provides, however he prefer a cookie less solution with the argument that his data can be used for things he is not aware of or directly have accepted. Arguments can therefore be made that for both the professionals working in the industry and for private consumers, the advantages of anonymization outweighs the disadvantages of lack of data and a worsened user experience. On the contrary Lehmann (2021) prefer a version of the current solution with Third-party cookies. The reasoning is that this provides her with transparency of how her personal data is being collected and used. She does prefer that consumers can make their own informed decisions (Lehmann, 2021). This statement indicates that to some consumers the transparency of cookies outweighs an option with more anonymization and less transparency. Kristiansen (2021) agrees with this as he is not fan of a solution with cookie less world based upon even more personal data. Kristiansen (2021) is as a professional in the marketing industry not a fan of a solution which limits his access to data. As a private person he prefers the transparency of cookies which can be deleted versus a cookie less world based upon even more personal data (Kristiansen, 2021).

6.4 The possible ethical implications of walled gardens such as Google Privacy

Google Privacy Sandbox has been transparent in their development and made it possible for stakeholders to make suggestions. They have expressed that their project must be beneficial to all industries. One point that is not sufficiently touched is whether the project's resulting data centralization benefits the consumer. Kristiansen (2021) is not convinced that a cookie less world is preferable and point out that he would rather have cookie lying around than Google and Facebook collecting his data. At the same time, he acknowledges Sweeney's (2021) statement, which places great emphasis on the fact that the online advertising industry has never taken user privacy into consideration. Arguments can be made for several ethical implications of walled gardens. A centralization of personal data provides few stakeholders the opportunity to define user privacy. An example of this is Google and Facebook, who currently defines user privacy differently in ways which consolidate their own power (Schiff, 2020b). On a community level there can be some ethical implications regarding a private oligopoly on personal data which dictates the definition of user privacy. Another concern is regarding the competitiveness between companies. This can arguably be flattened out since advertisement and digital marketing in general would be limited to a few walled gardens. Additionally, the walled gardens have no incentives to be transparent and thereby make companies less dependent on their services. An example of this is Google Privacy Sandbox's FLoC which according to Sweeney (2021) will not be transparent. On a global level such oligopoly can develop concerns regarding a few stakeholders dictates what is right and wrong. An example of this is the exclusion of former president Donald Trump on the platform Twitter. Another example is Facebooks verification function where post against their terms of conditions are deleted. Tommy Robinson, political activist, is deleted from Facebook. Further, you are not able to mention his name in a Facebook post or comment without the possibility of being temporarily banned (Lind, 2019). This example is not whether the exclusion is correct or wrong, but it is an illustration of the power

big MNEs possess. In an oligopoly with walled gardens, there is possibility of favoring industries, companies and political interests such as the Facebook - Cambridge Analytica data scandal.

7 Conclusion

The purpose of this sections is to assemble the key findings from the research questions. Therefore, there will not be presented new findings in this section. The key findings from the research questions will form the conclusion to the problem formulation.

This master thesis was set to analyze how Google Privacy Sandbox will impact e-CRM of Danish SMEs in e-commerce.

The conclusion to the problem formulation is that Google Privacy Sandbox will affect the available internet technologies, which is widely used in e-CRM of Danish SMEs in e-commerce. Google Privacy Sandbox will eliminate third-party cookies which will require Danish SMEs to focusing on first-party data to remain competitive. This shift will increase the value of SEO specialists to collect and utilize data as well as a developers that can customize websites to track user journey across site. In addition, collecting the valuable first-party data will require a greater focus which involves creativity and trade-off as the consumers are not enthusiastic about a larger collection of first-party data. Google Privacy Sandbox will also create a number of data blind spots. This will impact how marketing efforts can be evaluated and optimized in e-commerce. Further, it will require an established IT department or external consultants to cope with the implementations and maintenance of Google Privacy Sandbox. Consumer data legislations, which are often changed, will become further complicated with the implementation of Google Privacy Sandbox. Therefore, arguments can be made for an increased effort in company compliance within EU and national regulations in this area.

In eliminating third-party cookies as well as frequent changes in cookies laws, many of the automated processes implemented in SMEs in e-commerce will be affected by the individual software developers complying with the law. The elimination of third-party cookies with the implementation of Google Privacy Sandbox is a consequence of user privacy never has been weighted high in the

industry before. Next, a consumer trend derived from GDPR is that anonymity on the Internet is of high importance. Set against data centralization, it suggests that consumers are more likely to weigh their anonymity than the possibility of walled gardens. Therefore, Danish SMEs should also prepare for a future with Walled gardens, since the trend for consumers is that they would likely accept such a solution.

7.1 Implications

The implication section of this master thesis has been divided into two parts which is the implications for Danish SMEs and for researchers.

For Danish SMEs, this master thesis provides with an initial case study of how they could be impacted by the implementation of Google Privacy Sandbox in 2022. Additionally, the thesis has developed a readiness checklist from relevant empirical data, that could help Danish SMEs to prepare for this implementation. The purpose of the thesis is to give an insight and spark an interest for Danish SMEs to openly debate the current and future state of data-driven marketing.

For researchers, the master thesis gives an initial scientific study into the possible effects of Google Privacy Sandbox on e-CRM in Danish SMEs. It examine how SMEs can be affected and how they should prepare for the effects of Google Privacy Sandbox. The thesis also discusses the possible ethical implications of the current usage of third-party cookies and the ethical implications of an oligopoly of walled gardens. These ethical implications along with the suggested directions for future research would be interesting topics for researchers to further investigate.

7.2 Limitations and directions for future research

This master thesis has encountered some limitations which has affected the research. These limitations will be described in this section. Afterwards our suggestions for future research will be presented.

The master thesis has been conducted through covid 19 pandemic. A result of this is the researchers has not been able to be physical present at the office in Freeway ApS. This could have resulted in a deeper collaboration with the organization. Another aspect is the finite timeframe of the master's thesis. First, this could have provided a more representative result in the survey which could have improved the validity. Secondly an extended timeframe would have given us the opportunity to conduct semi structured interviews with all of the respondents which could have led to additional data. Next, since Google Privacy Sandbox project is still in a developing stage an improved research could have been done with a longer timeframe or at a later stage in the development. This would have allowed the researcher a clear understanding of how Googles innovations could impact e-CRM of Danish SMEs in e-commerce. Further this would have improved the literature review, which at this time is limited by the lacking amount of literature on the topic.

Furthermore, more stakeholders of Google Privacy Sandbox could have been included. A reach out to relevant representatives at EU was unsuccessful. This could have provided the study an in-depth analysis of the ongoing changes to the legislations and the consequences on Danish SMEs. Additionally, their view on the potential walled gardens and how they approach this area could have been relevant to the research. The researcher' has not tried to contact Google in the making of the thesis.

7.2.1 Future research

It would be interesting for a future research to analyze the effects of Google Privacy Sandbox on e-CRM at a later stage in the development. This would further specify how exactly SMEs should

prepare for the implementation of Google Privacy Sandbox as it is fully developed. It would also be interesting to interview a representative from Google. Both on the subject of a potential oligopoly of future walled gardens, but also to get their point of view on of the criticism Google Privacy Sandbox has encountered. Moreover, it would be beneficial to develop a more comprehensive and representative survey on the topic of walled gardens and anonymization, as it might provide more reliable results. Lastly, a future research including an interview with relevant representatives from EU could provide for a better understanding of how they see the future of digital marketing and what it comprehends in terms of user privacy.

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9 Appendix

9.1 Appendix A – E-mail interview Line Lehman

In your opinion, has the EU achieved what they would like with the implementation of GDPR and the elimination of third-party cookies?
My overall answer would be no

The intention behind gdpr is to ensure consumers in the best possible way and to achieve this goal, the European Commission has chosen to implement the strictest GDPR legislation to date. However, the current wording of the rules is not proportional to reality and the actual need for protection. By not making a major division of e.g. different types of cookies, all kinds of cookies are affected by the legislation, i.e. even those kinds of cookies, such as statistic cookies, that do not collect the kinds of personal data that you want to protect by GDPR legislation.

This is also why the EU is now making a strenuous attempt to adapt the legislation to reality by replacing the current ePrivacy directive of 2002 - on which the current Danish Cookie Executive Order is based - with the Regulation on data protection in electronic communications, also known as the ePrivacy Regulation or simply ePR. The new regulation is intended to exempt pure analysis cookies from the law. Cookies used for pure statistics and analysis of a website's performance should thus be exempted from the consent rule. However, the proposal only applies to first-party cookies, i.e. the cookies that are set by the website in question that the user has sought out. It is not yet clear whether third-party analytics tools such as Google Analytics will benefit from this exception. The regulation is not expected to be adopted until later this year and is unlikely to apply until 2023.

What the EU has currently achieved with their implementation of gdpr and the elimination of third-party cookies is not the optimal set-up for either consumers or traders, but has nevertheless been an important step towards ensuring that everyone has the correct approach to personal data.

The first part of changing the rules on GDPR – and also the most difficult part – has been to change the mindset of those who work with GDPR and those who provide personal data to companies and other kinds of organizations. By making the rules as strict as they are now and setting the level of fines so high, all parties have had to familiarize themselves with the rules and change their approach completely.

The EU has thus achieved a focus on the problem and active actions, risk assessment and concrete decisions by all parties that gdpr legislation frames. Thus, it is the technical execution that is lacking, as well as the final concretization and specification of the regulation, that is lacking – a real change in the law to provide full – but proportionate – consumer protection, while taking into account traders. In doing so, I also expect a more concrete discussion to be held on the future place of third-party cookies in the European Union.

As a private individual, would you prefer the current use of third-party cookies or a solution without cookies?

Personally, I want greater transparency on websites about what exactly is collected about me, where it ends up and what it is used for - even more information about it than is required today. This does not necessarily require a solution without cookies, but requires - as the set-up is currently - an active choice for the consumer, which he can take, on a sufficiently informed basis.

As a private individual, I would like to be able to get an overview of the data process very quickly, thereby also ensuring that the advertisements I actually see and the information I provide – are directed to something that I am interested in – not the company.

Is it realistic to be able to comply with GDPR and Cookie legislation without having a lawyer employed? (Please describe a little about your own role in Freeway and how much GDPR and Cookies take up in your everyday life)

My assessment would immediately be a no.

I am employed by Freeway groups as a legal consultant and act both as a compliance officer (ensuring that we comply with the law in all respects), DPO (Data Protection Officer – but without the training), HR department and consultant for approximately 15 different companies. I could easily spend all my hours just on GDPR.

Firstly, there is a reason why as many lawyers are being trained as they are now. It can be extremely difficult to navigate and interpret different legislation, especially when working at both national and EU level. Access to Danish laws with comments can be obtained through schemes such as Karnov, which are extremely expensive. In addition, the use of Karnov also requires that you know which laws to look in, which in itself can be a jungle, since we are again working with several laws and on several levels.

If you are a small- or medium-sized company that has not focused on GDPR until 2018, adapting to the new rules is a lengthy and difficult process, especially if you do not have a lawyer to guide you in the right direction. In general, it can feel like an eternity project, as there are constantly new initiatives, guides and new case law to deal with. This means that when you have just finished implementing a project, you may need to change it because new guidelines have come from the EU or the Danish Data Protection Agency.

However, the Danish Data Protection Agency can be very helpful in Denmark and is happy to accept inquiries from traders – there is help to be found, but even that help has its limitations, especially if you as a company are deeply dependent on personal data and process many of them.

Thus, if you are to be able to ensure in a company without a lawyer that you are compliant with GDPR, you must – in my opinion – invest in some IT systems or some AI that can do the work for you or get an employee trained for DPO. However, this can be extremely onerous for individual companies.

Is a lack of precedent on cookie legislation problematic for the competitive advantage in Denmark? (Outside the EU you do not care and in DK there is a picture of going after few in the individual industries)

The main problem at the moment is clearly that there is a distortion of competition in the Eu ropean Union. It is initially the data protection authorities of the various countries that assess whether there has been an infringement in the country. The starting point in the EU – with the exception of Denmark and Germany – has until now been to avoid taking a position on GDPR on websites to a large extent, but excluding the focus on transfers of personal data to unsafe third countries. However, cookies have not ranked high on the lists of the National Data Protection Agency. The Danish authorities have also been at a disadvantage during the 2-year "implementation period", but have published a number of more warnings and more criticisms of Danish traders who do not comply with the Danish Cookie Order or the Data Protection Regulation than other countries. This has now been taken on to the next step, as the first fine has been issued, albeit at a much lower amount than what was originally requested in the case.

The lack of precedent in general in the UK and the EU makes it difficult to be 100% compliant with the legislation, as no 100% knows what is meant by this. However, this is also seen to be taken into account if you look at the fine guidance concerning breaches of GDPR legislation.

Further, it seems to be a problem that many large websites go free of the consequences of non-compliance. Often you will see the Consumer Ombudsman or the Danish Data Protection Agency go after a player in the industry, but leave the remaining ones alone, presumably in the hope that the remaining companies will correct. However, this is not the case in DK, which is why there is not only a distortion of competition in relation to the EU and DK, but also internally within DK. It has therefore become a disadvantage to comply with existing legislation, which specifically affects those who are dependent on data but cannot afford or want to take the risk of not complying with the applicable law.

9.2 Appendix B – E-mail interview with Jan Skov

Do you think the EU has achieved what they wanted with the implementation of GDPR?
I find that question very difficult to answer. On the face of it, I think that the European Union has achieved a great focus on privacy and are forcing players in the market to take this field seriously. I believe that the introduction of GDPR has been a paradigm shift in terms of privacy.

As an individual, would you prefer the current use of third-party cookies or a solution without cookies?
As a private person, I find it difficult to see the value of third party cookies, and the importance of the elimination for me as a private person. At the same time, I believe that third-party cookie isolated poses a privacy risk.

What is your professional view on the elimination of third-party cookies?
Actually, the same as the above. This forces companies to work seriously with the collection of 1st party data and start working on how to use the collected data to create a relevant and personal experience

How much of a role do third-party cookies play in your current services?
Insignificant role.

What effect would Google Privacy Sandbox have on your services?
Very difficult to comment on. On the face of it, GPS seems to be conflicting with the free market. By virtue of Google's size, they have in principle oligopoly and the possibility of building so-called walled gardens.

How does Raptor prepare for the implementation of Google Privacy Sandbox?

We will develop integration to GPS which currently makes activation of the customer's 1st party data impossible.

Follow up question

How are your services independent of third-party cookies?

We have a retargeting product that uses 3rd party cookies, but it is used very little by our customers forming a vanishingly small part of our revenue.

All other "tracking" is based on the customer's 1st party data, such as 1st party cookies, e-mail, user logins, customer club IDs, payment card tokens etc. All of these are not affected by the elimination of 3rd party cookies.

9.3 Appendix C - E-mail interview Rasmus Olsen

As a private individual, would you prefer the current use of third-party cookies or a solution without cookies?

On a personal level, I am not against third-party cookies. Yes, I give some data away, but as long as it improves my experience of websites and targeted ads then I'm all for it.

However, when it can be used by third parties to show me data and content that only meets a different need than mine, then I have a problem with it. In a cookieless world, I avoid this. But I will also lose the use of data that meets my needs and experience.

But IF I HAVE TO choose between the two, then I wear cookieless. Solely for the reason that my data can be disclosed to third parties without me being directly informed.

How will elimination of third-party cookies affect your daily work with SEO at Freeway?

If the elimination means that I cannot apply tracking to the websites I work with, then it will have a big impact on my ability to evaluate my actions for organic traffic.

However, it must be said that I can get along well with the use of Google Search Console and other tools. But some on-page bets will - roughly speaking - be made partly blind.

Based on the 10 commandments in e-CRM, to what extent do you think these will be affected by the elimination of third-party cookies? (Just take the most important ones)

Compared to paragraph 5, it will be a huge upheaval, where all tracking and storageof data will have to take place with the little information that can be obtained with first party cookies. This will result in many companies that do not have an IT department that can handle the implementation of a solution losing important steps in competition. Compared to paragraph 9, it becomes difficult - or impossible

- to use data to target further marketing to the individual user. The data that can be collected can only be used on your own site, which is why you can only target the content to returning users. On the whole, all the points are affected to a greater or lesser extent. But as I understand it we can server side do first cookie tracking. If we can identify the individual user (and we should be able to do so to a large extent) then we can implement a data collection that can compensate for the lost amount of data in Google Analytics.

How have you felt the reduced amount of data from third-party cookies with the new and tightened cookie laws?

In the current legislation with the acceptance of cookies reduces the amount of data I am currently getting to work with. Of course, it is problematic not to get the complete dataset, but I am not completely "blind" and can still draw the essential numbers that I need.

However, there is an uncertainty about the dark numbers in the visits I do not see, as it is unknown whether the visitors who say no to cookies have the same approach to the site as those who say yes. There may be a possible discrepancy in their behavior.

How can you as a company prepare SEO wise for a future without third party cookies?

It's important for businesses to get ready for the elimination and work toward working without Google Analytics. In the future, the analysis work will be carried out exclusively through Search Console, rank tracking and tools such as Ahrefs and Semrush. Companies with their own developers must customize websites to track the user's journey across the site. This may be possible by using query strings etc (see Plusbog.dk).

In addition, all sites should - where possible and logically - work towards logging users in and thereby gain acceptance to log data server page and get the user to provide more information themselves. It is not impossible to continue to obtain data, it just will not be to the same extent as in the past.

9.4 Appendix D – E-mail interview Michael Sweeney

As a digital marketing expert, do you think that the EU has achieved what they wanted with the implementation of GDPR?

In some ways yes and in some ways no.

The goal of the GDPR was to protect personal data, hence the name, but also to make these data collection processes more transparent and give users a choice on whether they want their data to be collected and shared or not.

I personally believe that many of the articles in the GDPR are quite clear, but there are a lot of companies that have interpreted them in their own way and are not actually complying with the GDPR.

For example, the regulation clearly states that consent must be freely given and data controllers (e.g. websites) can't deny service or access to users if they refuse to provide consent or if they don't state their preferences.

Despite this, many websites are denying access to users if they don't agree to hand over their data. Some have adopted "assumed consent," meaning anything other than a direct "no" (e.g. closing the consent form and continuing to use the site without selecting their preferences) constitutes consent.

Many consent messages we see on websites are also not GDPR-compliant in my opinion as they often only give users one option (e.g. Accept) and require users to navigate to a different section to make their selection (e.g. reject data collection processes). The GDPR clearly states that if a company is using consent as one of the lawful basis for data collection, then they need to give users an explicit and clear choice as to whether they agree or refuse collection of their data. This isn't happening on a majority of websites.

Then there's the issue of investigating and handing out fines to companies who violate the GDPR. While we've seen many companies fined for not complying with the GDPR, it seems that there's a

backlog of complaints and decisions in some countries. We saw an example of this recently in a hearing before the Joint Committee on Justice of the Irish Parliament where the Irish Data Protection Commissioner (DPC) acknowledged that despite reporting more than 10,000 complaints in 2020, the DPC only plans six to seven formal decisions in 2021. This means that only 0.07% of all GDPR complaints might possibly see a formal decision.

Many European politicians say that the GDPR is working and is being used as a reference point for privacy laws in other countries, but it's hard to know what the EU wanted to achieve specifically. If it was to increase user privacy, then you can say that they've done that to a certain extent. I don't believe it's created the privacy paradise that many privacy advocates were hoping for.

When we compare the GDPR to privacy changes in web browsers, such as eliminating third-party cookies, then it's clear that privacy changes in web browsers have a much more immediate and significant impact than the GDPR.

Do you as a private person prefer the current third-party cookie tracking, or a cookie free world?

I personally believe that online advertising should be balanced between user privacy and ad personalization. Advertising was around long before the Internet, but the introduction of online advertising allowed advertisers to better reach their target audience and accurately measure the performance of their campaigns.

For example, instead of showing an ad in a newspaper that could be seen by anyone who buys it, online advertising allows advertisers to show their ads to specific audiences based on their interests and web history. Third-party cookies are a mechanism that allows advertisers to do this across different websites, but the user privacy aspect was never taken into consideration.

I'm looking forward to a world without third-party cookies as it will mean that user privacy will be at the forefront of online advertising, which it should have been from the start.

What is your professional view on the elimination of third-party cookies?

I believe it's a positive thing for both the online advertising industry and the Internet. The use of third-party cookies for ad targeting and personalization has been a very opaque and secretive process. The online advertising industry never took user privacy into consideration when it started using third-party cookies for identification and that's why we're in the position we are now. Governments, web browsers, and tech companies like Apple have had to step in and introduce changes to increase user privacy because the online advertising industry didn't do it itself.

While I believe that the elimination of third-party cookies for identification is a positive thing, I believe that personalized advertising should prevail, albeit in a privacy-friendly way. Google Chrome has proposed its Privacy Sandbox as a replacement for the processes carried out by third-party cookies, which I believe is a step in the right direction.

How do Clearcode prepare for the implementation of Google Privacy Sandbox?

- Which aspects of Clearcodes marketing department will be affected by this implementation?

Our marketing activities aren't going to be interrupted too much by the end of third-party cookies in Google Chrome and the introduction of Privacy Sandbox because, unlike big brands that show ads to people across different websites, we typically show ads on Google Search and LinkedIn. We may see some decreases in our conversion data, but we'll still have our web analytics data and that's sufficient for us.

Our biggest channel for lead generation and brand awareness is search engine optimization (SEO), which is conducted on a first-party basis rather than a third-party basis, meaning our web analytics tools will still collect web analytics data because it's collected and stored using first-party cookies, which won't be impacted by the elimination of third-party cookies.

We may experiment with Privacy Sandbox, but it won't represent a large part of our marketing activities.

From a business perspective, we're a software development company that specializes in building advertising and marketing technologies. Many of our clients, which consist of tech companies, ad agencies, and publishers, will want to utilize Privacy Sandbox. This actually puts us in a really great position as we're a company that can help them with the technical implementation of Privacy Sandbox.

- Which e-CRM technologies would you argue could suffer from Google Privacy Sandbox? (On behalf of Clearcode and the ten commandments)

At the moment, I don't believe many CRM technologies will suffer from Google Chrome's Privacy Sandbox as most rely on first-party data and first-party cookies, which will still be available. For the most part, Privacy Sandbox is focused on cross-site advertising and many CRM and marketing technologies are connected with marketing to existing audiences stored in a company's database (e.g. CRM) and can be shown marketing messages via e-mail.

- Are there any general concerns in the AdTech and Remarketing business for their business model existence post Google Privacy Sandbox?

In general, pretty much every AdTech company is worried about the end of third-party cookies and the introduction of Google's Privacy Sandbox because the future will look a lot different than the past and present.

For companies that have built their businesses around collecting and using third-party data, such as data management platforms (DMPs), the elimination of third-party cookies will have a big and negative impact on their business because there will be much less data to collect and use.

Remarketing will also suffer substantially to a point where it probably won't be viable, unless it's done via Google's Privacy Sandbox (i.e. via the TURTLEDOVE or FLEDGE standards). However, there are many AdTech companies, such as demand-side platforms (DSPs), that specialize in remarketing campaigns and these companies will need to shift their focus away from remarketing as it simply won't work once Chrome shuts off third-party cookies.
Many AdTech and data companies will need to change their business model and tech to adapt to this new world.

As a marketing expert, how do you believe the competitiveness between companies would be affected by Google Privacy Sandbox?

I believe the elimination of third-party cookies and the introduction of Google's Privacy Sandbox will flatten the competitive landscape between most AdTech companies. Third-party cookies allowed any AdTech company to run cross-site ad targeting and build up their own audiences for advertisers to use.

Many of the standards in Chrome's Privacy Sandbox also allow companies to create audiences (e.g. via FLoC), but it's too early to tell whether these audiences will all be the same or whether it will be possible for companies to create their own audiences. If it's the former, then it will likely lead to a lack of differentiation between AdTech companies as essentially every company will have access to the same audiences.

However, there are many other ways companies can differentiate themselves from the competition rather than just by the audiences they have access to, so it may turn out that companies expand their client offering and focus on other areas of their business.

- Do you think that it would make SMEs more dependent on Google?

Yes. Although Google's AdTech products for the open web will be impacted by the elimination of third-party cookies in the same way as independent AdTech companies, Google will still have a lot of valuable first-party data for Google Search and YouTube. Advertisers may see more value in reaching their audiences via Google Search (i.e. Google Ads) and YouTube rather than via Privacy Sandbox, which will increase Google's ad revenue.

It's a similar situation with other privacy changes like the GDPR where walled gardens like Google and Facebook actually receive increases in ad revenue as less advertisers run campaigns on the open Internet.

Having access to valuable first-party data will be a key driver for success in this new privacy-focused world, and Google has more than its fair share of it.

However, there are many ID solutions being proposed which will still allow companies to identify their audiences across different websites, albeit in a much more limited way than now. These are seen as an alternative to third-party cookies so it may turn out to be a better option than Google's owned and operated sites (Google Search and YouTube) and its Privacy Sandbox.

Hello Michael.

Thank you very much for your answers. They look great.

We do have a followup question in regards to 1st party data.

We have talked to a company who makes software that creates customer personalization on websites. They argue that Google Privacy Sandbox will complicate the collection of 1st party data to use for customer personalization, and that they will develop a software which can be integrated into still gaining this instant 1st party data and put it to use instantaneously.

Do you agree with the argument that Google Privacy Sandbox can complicate this process?

Sincerely. Jens and Andreas.

Hi Jens,

Thanks for the follow-up question. I've written it below in blue.

Do you agree with the argument that Google Privacy Sandbox can complicate this process?

If we are talking about the collection and use of a website/publisher's first-party data to power FLoC, then yes. The reason I say that is because FLoC will remove the decisioning processes away from websites/publishers and AdTech companies and towards Chrome. There won't be much control and transparency over how these cohorts (i.e. audiences) are created. It's too early to say what the final version of FLoC or any of the other Privacy Sandbox standards will look like and what control and options publishers and advertisers will have, but because it will work a lot differently to how programmatic advertising works currently, it will complicate things for publishers and advertisers in the way they adjust their ad operations and campaigns.

However, if we're talking about onsite personalisation that's conducted by the website itself, then I don't think Privacy Sandbox will impact it at all. Privacy Sandbox is designed for advertising across different websites. If a website wants to show its customers a personalised message, then they'll still be able to do so without using Privacy Sandbox.

Let me know if you need some more clarity on that or if you have any other questions.

9.5 Appendix E – Interview Thomas Kristiansen

AM: as talked about, what effect could this have on e-CRM in Freeway ApS (Google Privacy Sandbox)?

TK: when you are losing data, it has consequences on your performance. Do we suddenly loose some data which improved our marketing efforts, then we will perform worse.

AM: Could you assume that a lot of the automated processes would not work anymore and would impact the revenue and be costly to change?

TK: Yes, a lot of them which operates on people's behavior. I usually say that when succeed in marketing, you provide the right message to the right person at the right time. To do this you need to know who, what and how and this will be harder without data.

JF: How much data have you lost due to the sharpened cookie regulations?

TK: I estimate that this is around 20-40% through the different companies.

AM: is Google consent mode related to cookies?

TK: …. I have always used Google Analytics to navigate and optimize our marketing efforts and Google Analytics is based on cookies. Whenever users are visiting our website who decline cookies, we cannot see them. We can see our revenue streams increase but we cannot analyze what effort cause it. Whether it was from Google, Facebook, Instagram etc".

JF: What is your opinion regards that companies need to prepare for future without any third-party data available?

TK: personally, I believe this industry, the amount of money and the power is too big not to solve this issue if the current solutions would no longer be available.

AM: … Few believes that the solution will be as good for remarketing.
TK: Yes, and then you have the whole paradox of having some people who have made these laws with the idea to preserve data and that the big MNEs should not get bigger, but in reality, it has the reverse effect. You make it very difficult for small companies to enter and stay competitive in this industry.

TK: Those who have made the cookie law has made mistakes which you can now see. They start to make drawbacks to whether you should be able to put statistical cookies out. Which is them saying that they didn't formulate the law correct and it was too wide when including statistical cookies. The process of changing this takes maybe five years in EU. You get the impression that they just think they made a mistake and that they can correct it, but they are forgetting that this mistake is extremely expensive and has major consequences for companies.

TK: Mailchimp store their data in US and thereby do not comply with GDPR. A possible switch to another software is an expensive process and have a lot of aspect to it.

JF: Do you agree that marketing is going back to a cleaner form?
TK: In some way yes. I am preparing for a situation where we are going to use the old marketing books again, and we are looking forward to a world where we cannot measure everything. Do you know the phrase: *Half the money spend on advertising is wasted; the trouble is I don't know which half.* this was the reality at one point. You would spend a lot of money on advertisement and your

revenue increased. Thats great, but you don't know what cause the effect. It could have been a competitor who when out of business. Another example could be if you invested in an ad on a paper and an ad on in the traffic. You could not estimate which add brought the increased revenue.

JF: Do you agree that marketing will go back to a cleaner form without a massive extent of data and that companies should start preparing for this?

TK: Yes 100 percent.

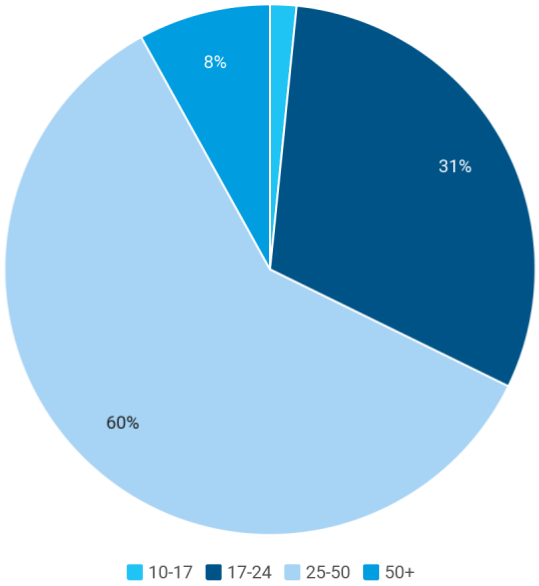
TK: …. I have been told from a legal consultant at The Danish Chamber Of Commerce that Denmark is the only country within the EU which actually even try to comply with these regulations. And we are one of the companies who actually are very good at complying compared to our domestic competitor.

AM: How would you assume that Google Privacy can affect Freeway ApS?

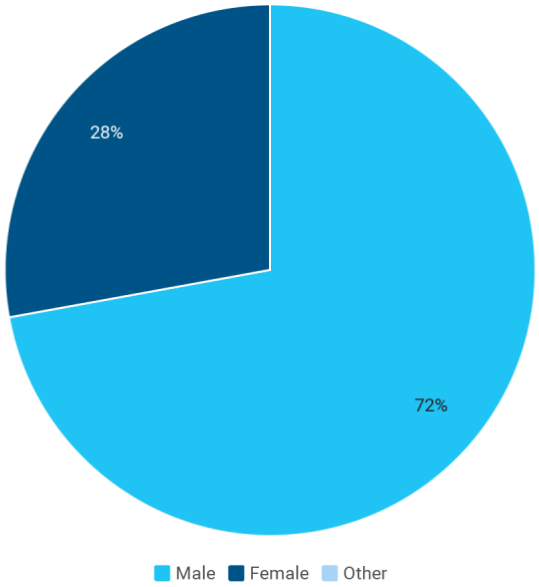
TK: I have a professional and a private opinion. As a professional, I am currently losing a lot data and being put back into the time where you simply put an ad sign in the side of the road and hope for the best without any tracking. I am simply hoping for a solution and Google seems to be working on it since it is also messing with their business. In other words, I don't care what the solution is, I just need one. As a private person: what is really best? Is it to have some cookies on your browser in which you can remove yourself at any time? Or is it a cookie less world which is based upon some even more private information about me such as e-mails and logins. As a private person I prefer cookies.

9.6 Survey

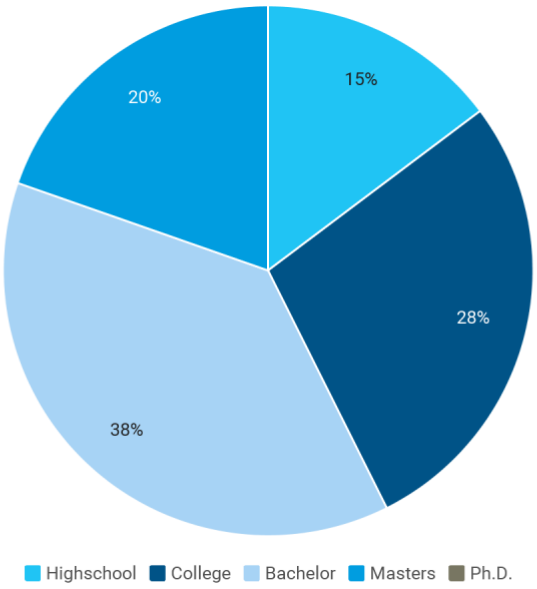
9.6.1 Age



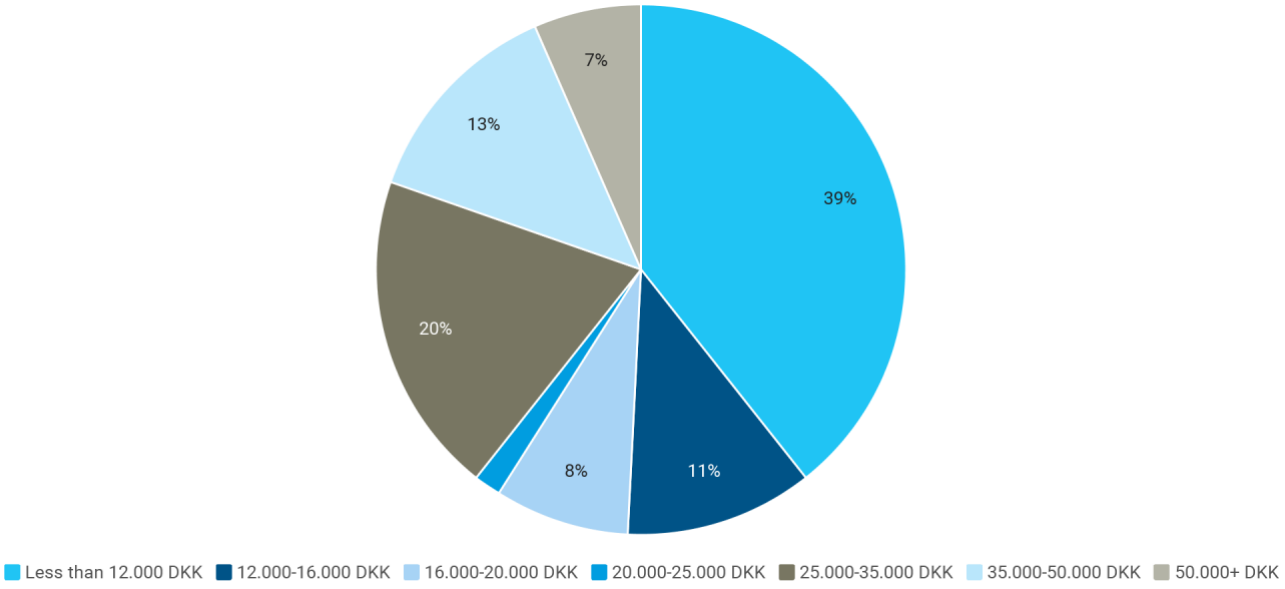
9.6.2 Gender



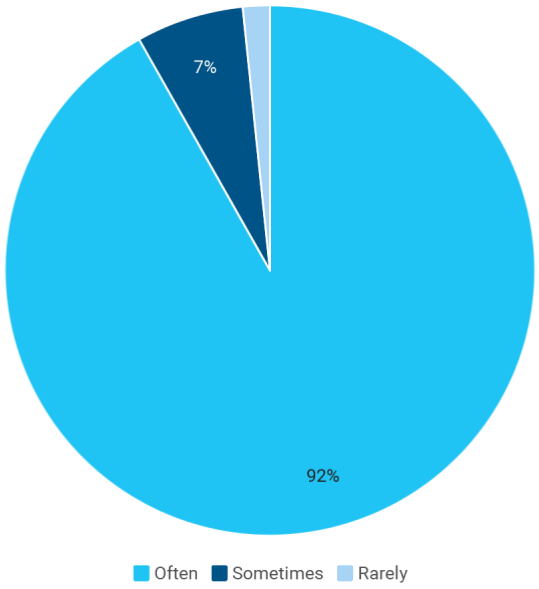
9.6.3 Highest finished education



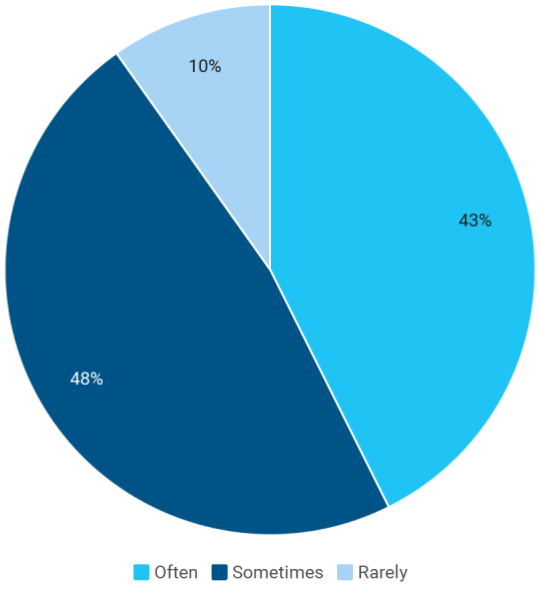
9.6.4 Montly income before taxes



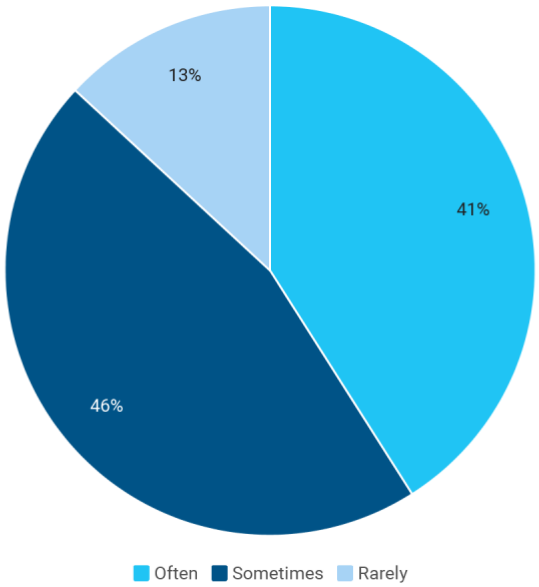
9.6.5 How often do you use the internet for the following purposes? - Social Media



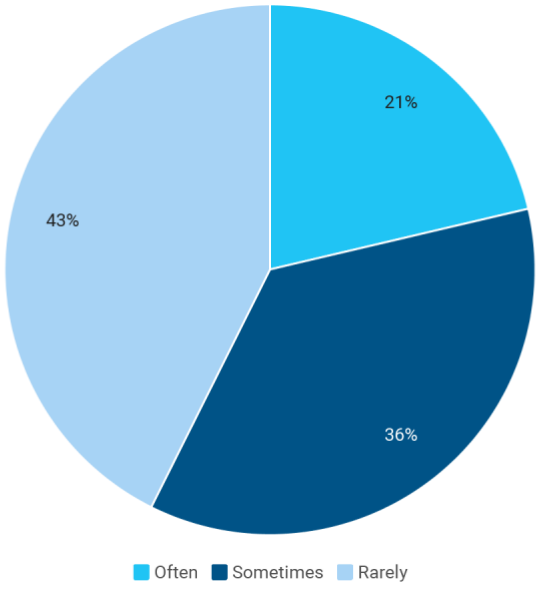
9.6.6 How often do you use the internet for the following purposes? - Newschannels



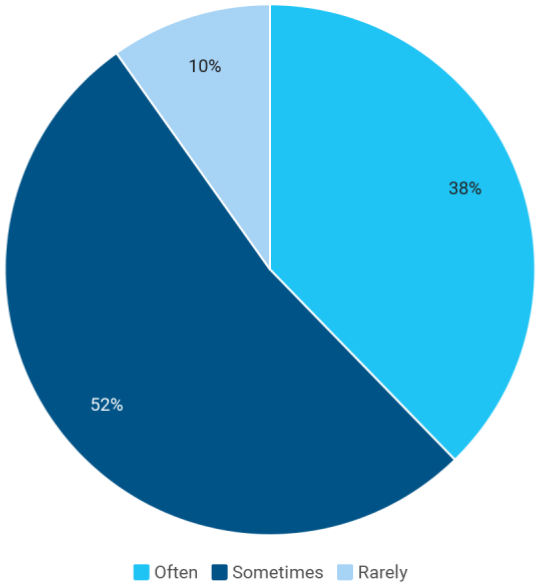
9.6.7 How often do you use the internet for the following purposes? - Personal finance



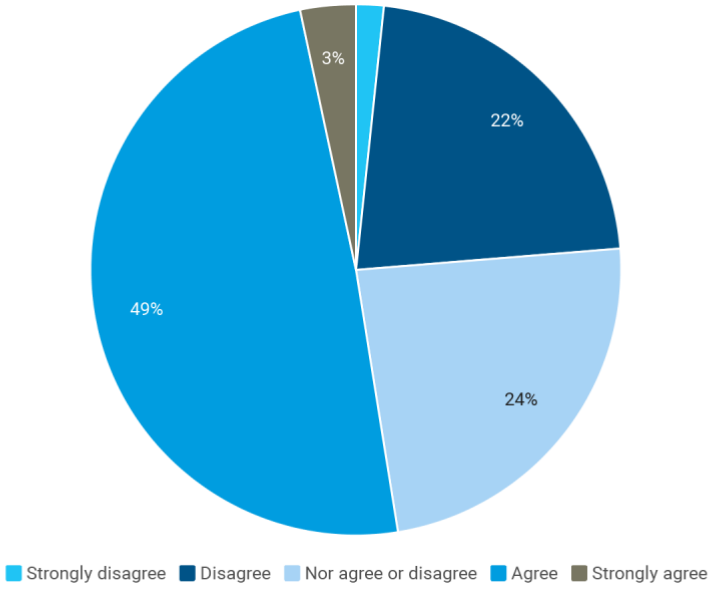
9.6.8 How often do you use the internet for the following purposes? - E-commerce



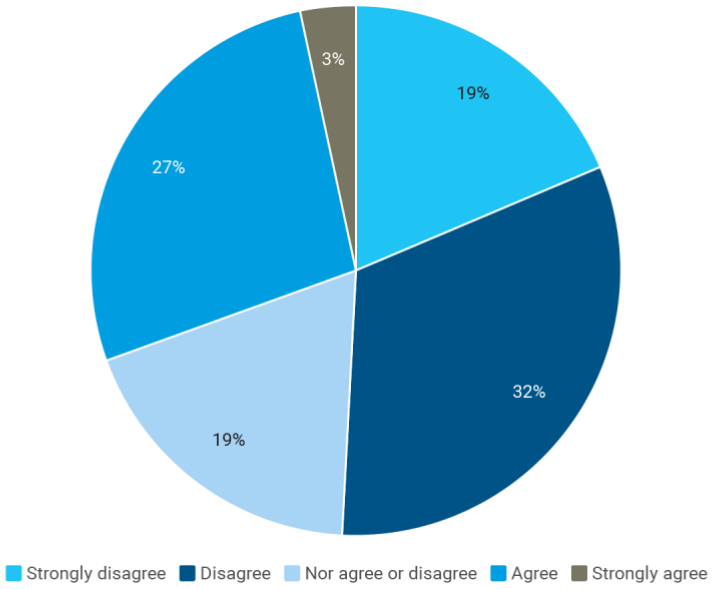
9.6.9 How often do you use the internet for the following purposes? - Public information and self-service



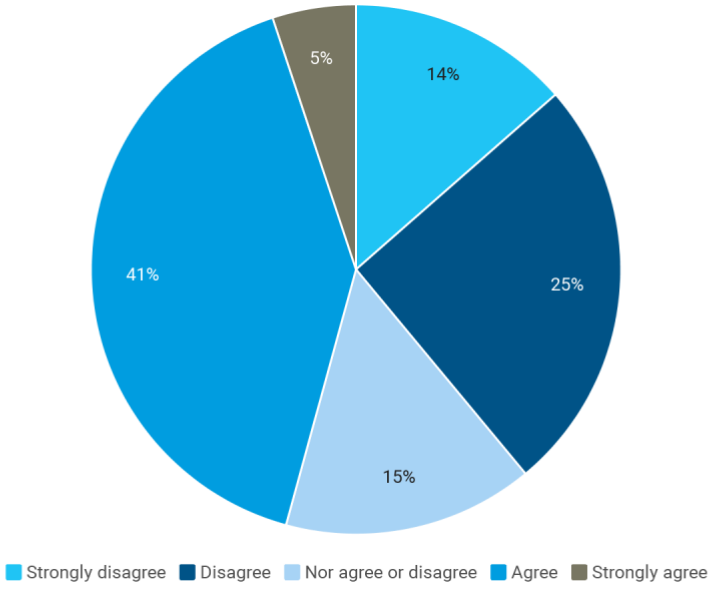
9.6.10 I am concerned about my online privacy



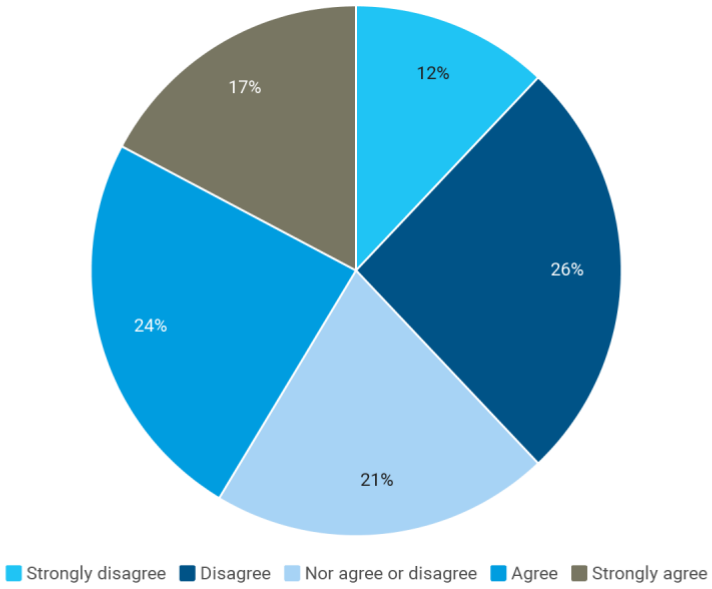
9.6.11 I read about how I protect my privacy online



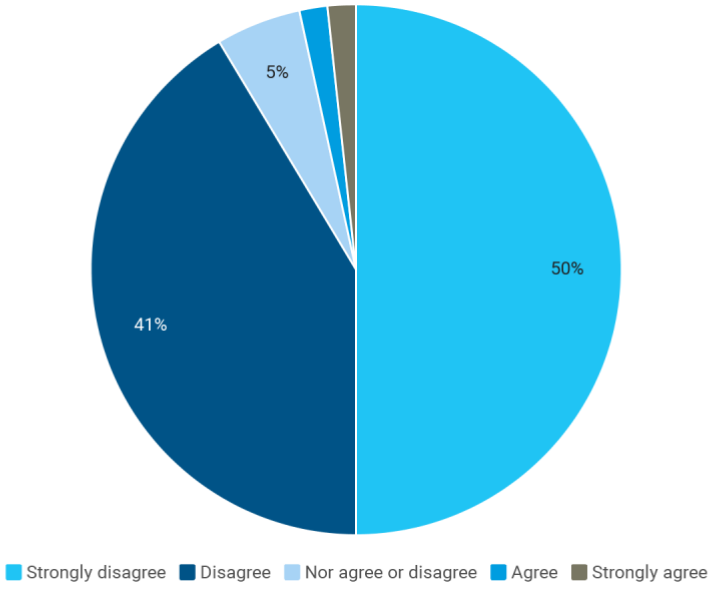
9.6.12 I understand what the acceptance of cookies entails



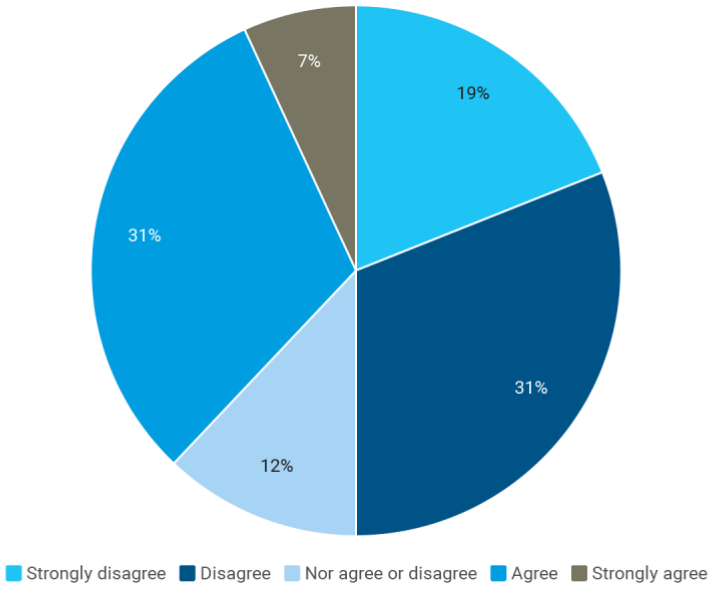
9.6.13 I always accept cookies when visiting websites



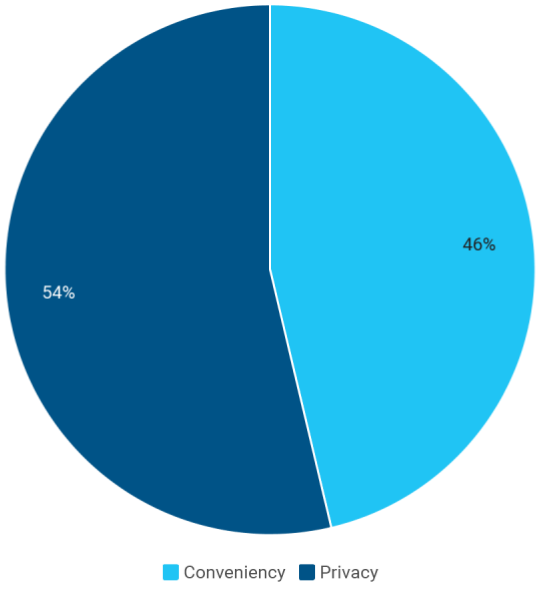
9.6.14 I read the cookie declaration on the individual web pages



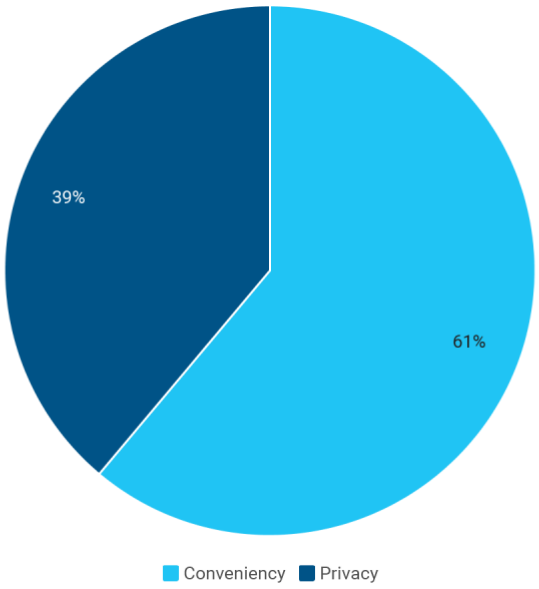
9.6.15 I rarely say no to cookies as it detracts from the user experience



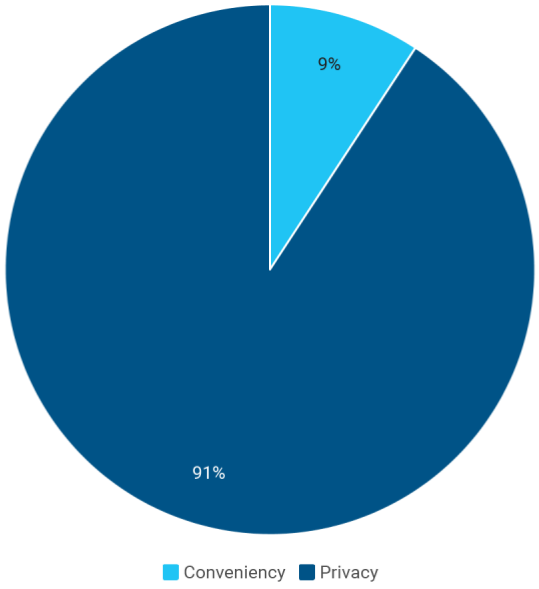
9.6.16 Social media



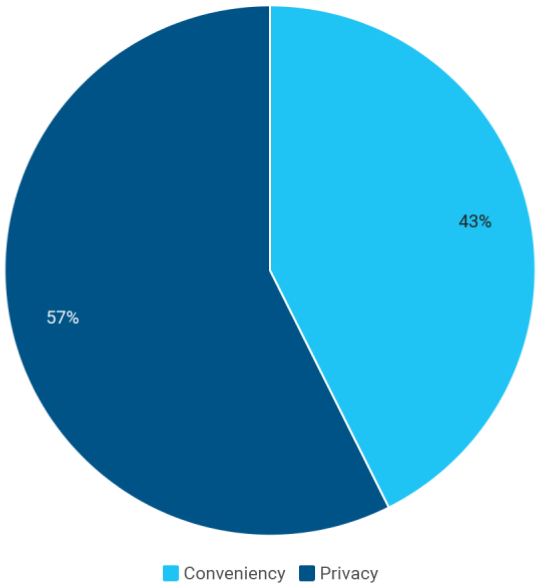
9.6.17 News channels



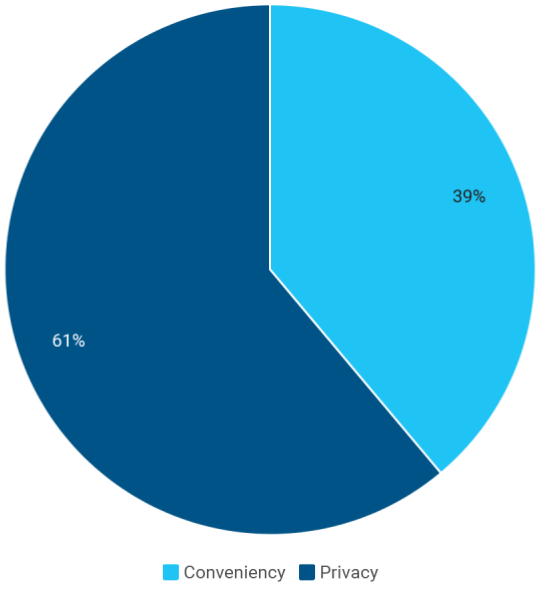
9.6.18 Personal finance



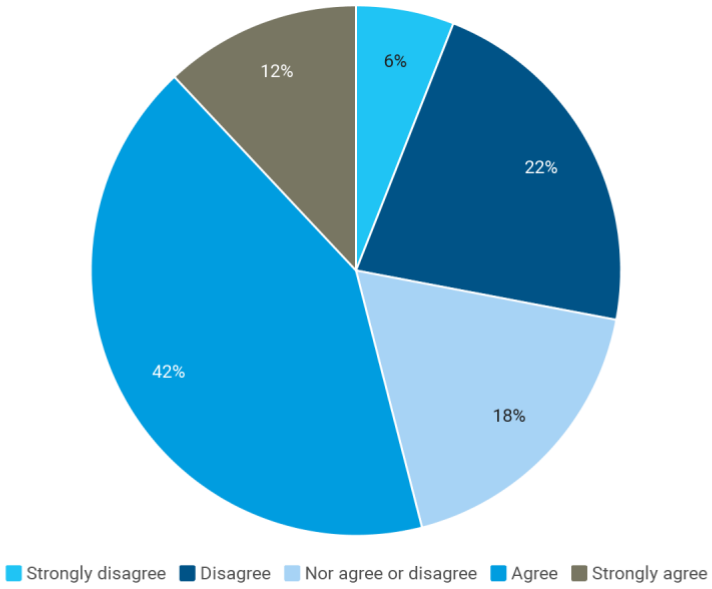
9.6.19 E-commerces



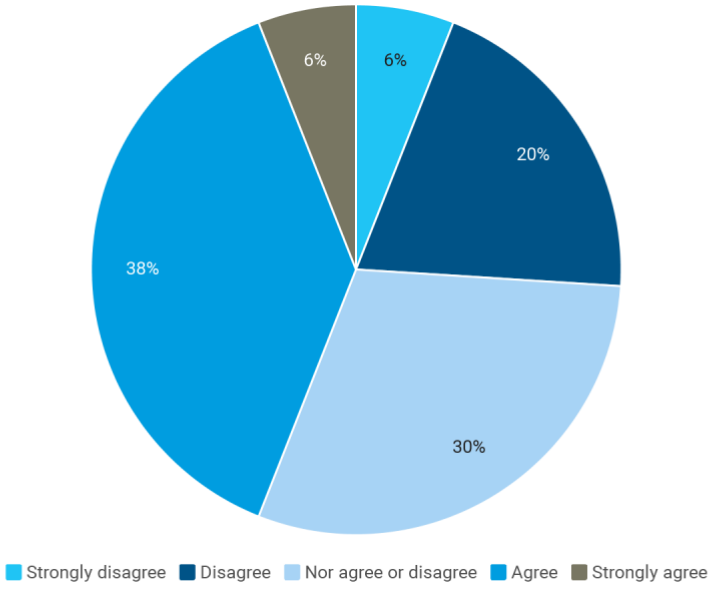
9.6.20 Public information and self-service



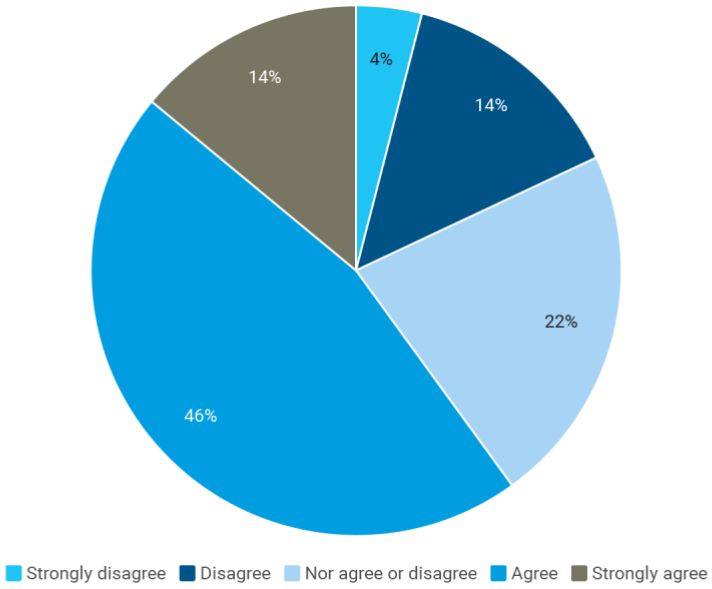
9.6.21 I value complete online anonymization



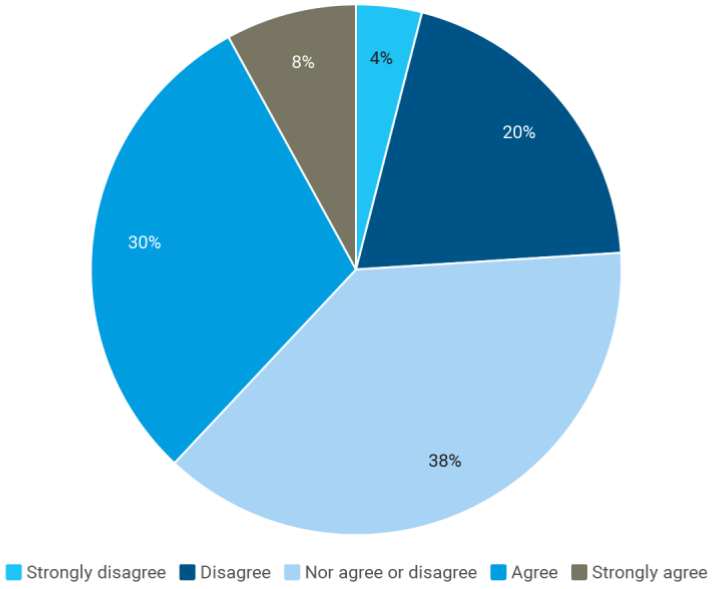
9.6.22 I value personalized consumer experience when browsing the web



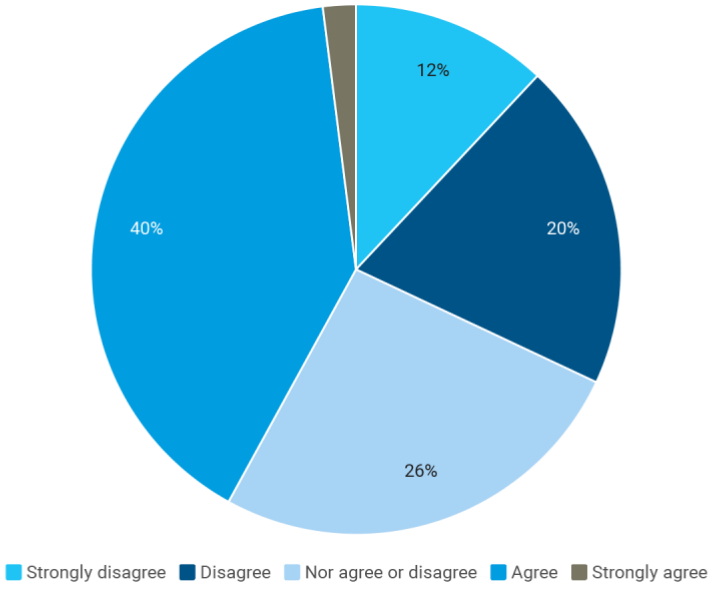
9.6.23 I asses anonymization to be more important than customer personalization



9.6.24 I value anonymization, even if it leads to centralization of personal data(read definition below)



9.6.25 I will accept a likely increase in collection of 1st party data such as e-mail verification, user-logins, Customer Club id etc.



9.6.26 I am concerned about a potential Walled Garden(read definition below)