



JÖNKÖPING UNIVERSITY

*Jönköping International
Business School*

“Augmented Reality, the future of marketing?”

A qualitative study investigating consumers' perceptions of Augmented Reality Marketing within the context of High Involvement Products

MASTER'S DEGREE PROJECT

THESIS WITHIN: *Business Administration*

NUMBER OF CREDITS: *30 ECTS*

PROGRAMME OF STUDY: *Digital Business*

AUTHORS: *Eveline Eskengren & Elin Hultin*

JÖNKÖPING *May, 2022*

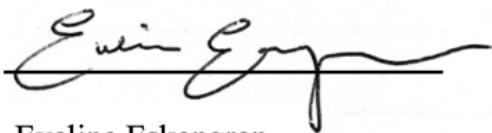
Acknowledgments

We have received a lot of support and assistance throughout the course of our master's thesis, therefore, there are several people we would like to express our profound gratitude with a few words. First and foremost, we wish to send a warm thank you to all participants for taking the time and effort in participating in our study. We had so much fun doing the interviews and observations with you, with great discussion helping us receive valuable insights for our study. Without your commitment and support, this thesis would not have been the same.

We would also like to give a special thanks to our supervisor, Anna Blombäck, for her insightful guidance, constructive feedback and always motivating manner, guiding us throughout the thesis process in a very professional way. Furthermore, our fellow students from the thesis group who provided helpful recommendations and interesting discussions to continuously improve our work during the monthly seminars.

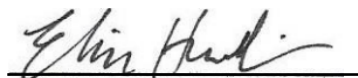
Last but not least, we wish to show great appreciation to our families who never stopped cheering on and always boosted us with confidence, you truly were our source of motivation.

All the best,
Eveline and Elin



Eveline Eskengren

Jönköping, 23th May 2022



Elin Hultin

Master Thesis Project in Business Administration

Title: Augmented Reality, the future of marketing?

Authors: Eveline Eskengren & Elin Hultin

Tutor: Anna Blombäck

Date: 2022-05-23

Key terms: “Augmented Reality” (AR), “Augmented Reality Marketing” (ARM), High Involvement Products, Digital Marketing, Consumer Perceptions, High Involvement Product Purchases

Background:

“Augmented Reality” (AR) is becoming increasingly common. It is a technology that reinforces individuals’ perceptions of their reality by overlaying digital elements in the physical world. “Augmented Reality Marketing” (ARM) is when one uses AR to assist the consumer and support specific branding or sales. Researchers argue ARM has numerous advantageous effects on consumers. It is for example shown in laboratory settings that ARM can increase customer value, engagement, and satisfaction. However, few researchers have devoted attention to understanding how consumers perceive ARM and if they have an interest in using it in real-life settings. This is important to study since the potential benefits recognized in research will not occur if the consumer has no interest in engaging with ARM. As ARM tends to have certain opportunities overlapping the common challenges related to “High Involvement Product” (HIP) purchases, we propose it could be enriching to explore how consumers perceive this form of marketing in the HIP context.

Purpose:

The purpose of this study is to help bridge the existing gap in the literature regarding ARM about how it is perceived by consumers, and why. The study will contribute to this gap by focusing on ARM in a HIP context to increase understanding and knowledge about if, when, and how ARM is efficient and value-adding. Consequently, we aspire to provide valuable insight for practitioners within the marketing field by exploring the perceived usefulness of ARM in HIP purchases.

Method:

Based on a qualitative and exploratory research design, a total of 20 face-to-face contextual interviews were conducted. Through semi-structured interviews and observations, we were able to both discuss how consumers perceive ARM in the context of HIP, while also observing how they interacted with the ARM applications. Thereafter, we analyzed the empirical data through thematic analysis, identified and contrasted similarities and differences, and compared the result with extant research to identify new findings as well as draw conclusions.

Findings:

The empirical findings reveal consumers perceive ARM to be a valuable tool offering both informative and emotional benefits, that they, therefore, are interested in engaging with in HIP purchases. However, ARM is not perceived as a substitute for other sources of information, instead viewed as a complementing tool. It is also perceived as a bit time-consuming, unreliable and difficult to use, yet, as a tool with great potential that they think will be standard practice in the future. Further, it was found consumers perceive ARM as most useful when the design of the product is the core aspect of the purchase, hence, ARM might not be important to implement for all firms. This is because the main benefit recognized with ARM is the ability to visualize the product in a realistic setting before purchasing.

Table of Contents

.....	1
1. Introduction.....	1
1.1 Research Problem.....	2
1.2 Research Purpose	3
2. Frame of Reference.....	4
2.1 Augmented Reality Marketing (ARM)	4
2.2 Advantages and Challenges Related to ARM.....	6
2.2.1 Experiential	6
2.2.1.1 Experiential Advantages.....	6
2.2.1.2 Experiential Challenges	8
2.2.2 Emotional	9
2.2.2.1 Emotional Advantages.....	9
2.2.2.2 Emotional Challenges	10
2.2.3 Economic	11
2.2.3.1 Economic Advantages	11
2.2.3.2 Economic Challenges	12
2.3 High Involvement Products (HIPs).....	13
2.3.1 Defining HIP through the consumer's personal relevance	13
2.3.2 Defining HIP through the product's characteristics.....	14
2.3.3 Defining HIP through the decision-making processes.....	14
2.3.4 Concluding the definitions of HIP	15
2.4 Digital Marketing for HIPs	16
2.4.1 HIP Marketing Engagement.....	17
2.4.2 HIP Marketing Content.....	17
2.4.3 Attitudes Towards HIP Marketing.....	18
2.5 Compilation: Is ARM relevant for HIP?	19
3. Method	21
3.1 Method: Frame of Reference	21
3.1.1 Method for identifying themes in 2.2 Advantages and Challenges with ARM	22
3.2 Research Philosophy	23
3.3 Research Design.....	24
3.4 Data Collection.....	25
3.4.1 Primary Data Collection: Contextual Interviews	25
3.4.2 Sampling Strategy	27
3.5 Contextual Interview Design.....	28
3.5.1 Selection of ARM-Apps.....	30
3.5.2 Interview Procedure	31
3.6 Data Analysis	33
3.6.1 Analysis of Findings	34
3.7 Trustworthiness of Study	35
3.7.1 Credibility	35
3.7.2 Transferability	36
3.7.3 Dependability	36
3.7.4 Confirmability	37
3.8 Research Ethics	37
4. Empirical Findings.....	40

4.1	Complementing Tool.....	41
4.1.1	Assisting the Decision.....	41
4.1.2	Confirming the Decision.....	41
4.2	Valuable.....	42
4.2.1	Practical Advantages.....	42
4.2.2	Emotional Advantages.....	44
4.3	Future Potential.....	45
4.3.1	Possibilities.....	45
4.3.2	Interest of Use.....	47
4.4	Challenging.....	49
4.4.1	Personal Barriers.....	49
4.4.2	Risk.....	50
4.4.3	Lack of Trust.....	52
4.4.4	Fails to Meet Expectations.....	52
5.	Analysis.....	55
5.1	Complementing Tool.....	55
5.2	Valuable.....	56
5.3	Future Potential.....	59
5.4	Challenging.....	62
6.	Conclusion.....	68
7.	Discussion.....	70
7.1	Theoretical Contribution.....	70
7.1.1	New benefits and challenges identified related to ARM.....	71
7.2	Managerial Implications.....	72
7.3	Limitations.....	73
7.4	Future Research.....	75
	Reference List.....	77
	Appendix.....	85
	Appendix A – Table of Keywords.....	85
	Appendix B - Articles in Frame of Reference.....	85
	Appendix C – Interview Guide.....	86
	Appendix D – Participant Consent and GDPR Information Sheet.....	88
	Appendix E – Coding Tree.....	90

FIGURES

FIGURE 1	Research Onion.....	23
FIGURE 2	Steps of Thematic Analysis.....	33
FIGURE 3	Example of Coding Process.....	34
FIGURE 4	Summary of Empirical Findings.....	40
FIGURE 5	Summary of Analysis.....	66-67

TABLES

TABLE 1	Summary of advantages and challenges related to ARM.....	13
TABLE 2	Overview of Search Parameters.....	22
TABLE 3	Overview of Participants.....	29
TABLE 4	AR Applications exposed to observation informants.....	30

List of Abbreviations

Abbreviation	Meaning	Definition
AR	Augmented Reality	AR is a tool reinforcing a person's perception of his or her reality by overlaying digital elements (as graphics, video, and audio) in that person's physical world. Hence, one does not go into a new digital world, but sees digital elements in one's physical surroundings.
ARM	Augmented Reality Marketing	ARM is when one applies AR into business environments to improve the consumer journey, brand perception, and engagement - to support specific branding and sales.
ARM Application	Augmented Reality Marketing Application	It is a type of ARM platform, where consumers download an application (app) to engage with the ARM technology.
GDPR	General Data Protection Regulation	GDPR is a legal framework implemented in the European Union (EU) in 2018, that sets the guidelines for how firms and organizations are allowed to collect and process personal information from individuals living in the EU (Directive 95/46/EC).
HIP	High Involvement Product	Products with certain characteristics that are perceived as personal and emotionally important for the consumer so that the cost of making a poor decision becomes high.
VR	Virtual Reality	VR is a computer-generated world where the scenes and objects one visualizes with the help of a VR headset or helmet appear to be real. Hence, it is when you go into a new world that does not physically exist.

1. Introduction

This chapter provides an overview of the study by introducing the concept of ARM through background, problem discussion, and the study's purpose. In the end, the chapter is concluded by presenting the research questions.

With today's disruptive technologies, companies can create superior customer purchase experiences by bringing the virtual- and real-world closer together. One of the most emerging innovations within marketing and sales is Augmented Reality (AR) (Sung, 2021). AR is a technology that reinforces an individual's perception of their reality by overlaying digital elements in his or her physical world. Two examples of AR are Snapchat-filters and Nintendo's digital game "Pokémon Go" (Rauschnabel, 2021). When using AR within marketing, it is called Augmented Reality Marketing (ARM). This refers to when companies focus on enabling digital cues in physical environments designed to assist and improve consumer actions and experiences with AR (Scholz & Smith, 2016; Dwivedi et al., 2020). ARM can shape consumer behaviors by incorporating digital information or objects into an individual's perception of the physical world to support specific branding or sales (Hinsch et al., 2020, Rauschnabel et al., 2019). It can, for instance, be the ability to try on accessories and clothing online, or test a new piece of furniture in one's home before buying it. Today, AR technology's impact on the global market cannot be neglected. In 2020, as part of the extended reality industry, the AR market grew to \$17.67 billion which is expected to be more than doubled in 2022. By the end of this decade, global AR spending is forecasted to be an outstanding \$340 billion (Grand View Research, 2021; Berman & Pollack, 2021; Boland, 2019).

With 3.5 billion users of smartphones obtaining all the necessary means for AR use, the increased usage of ARM has not surprisingly started to receive attention from both researchers and organizations (Agrawal, 2018; Kumar, 2021; Statista; 2022). Researchers argue ARM has numerous advantageous effects on consumers. It is for example shown that ARM can increase customer value, engagement, brand trust, and consumer satisfaction (Kowalczyk et al., 2021; Qin et al., 2021; Sung, 2021; Berman & Pollack 2021; de Ruyter et al., 2020). Additionally, ARM tends to provide inspiration (Rauschnabel, 2021), form positive brand attitudes (Kumar, 2021), and ease the purchase process by reducing perceived risks which facilitates the decision-

making process (Rauschnabel, 2021; Kumar, 2021; Alimamy & Gnoth, 2022). As ARM enables consumers to experience the product more authentically, it allows consumers to make more informed decisions and thus avoid sunk costs related to poor purchases. However, it is still not clear from extant literature in what contexts ARM should be used to reach its full potential.

1.1 Research Problem

Despite the increasing interest from both companies and researchers regarding ARM and its advantages, knowledge about when and how ARM should be used is inadequate. First, little is known about the consumers' attitudes towards embracing and adapting ARM (Rauschnabel, 2021). It is argued ARM has multiple positive effects on consumers and consequently business performance, however, these findings are mostly derived from research lacking the "real-life" consumer perspective (Kumar, 2021). The majority of current studies are conducted within a laboratory setting which provides quantitative results and excludes the possibility of gaining a deeper understanding of how ARM is perceived by the consumer, and why (Rauschnabel, 2021). Consumers play an important role in whether implementing ARM pays off as their perception, understanding, and utilization of the technology steer the results. Hence, the potential benefits of ARM identified in research will not occur if the consumer has no interest in using the ARM platform in real-life settings, which is why it becomes an important area to study (Kowalczyk et al., 2021; Qin et al., 2021; Sung, 2021). This is also highlighted by de Ruyter et al. (2020), who explain that managers are skeptical about investing in AR since they lack knowledge of if and how consumers will utilize the technology. Sridhar and Fang (2019), emphasize this by explaining that even if AR is a ubiquitous technology, firms do not know whether, when, or how to use it. It is evident AR could lead to increased sales and competitive advantage, but only if appreciated by the consumer. If not, it could lead to an overall negative payoff instead. Hence, exploring the consumers' preferences and attitudes toward AR in marketing is essential to understanding the full potential and important factors for success (Arghashi & Yuksel 2022; Watson et al., 2013).

To add to this dearth of knowledge about when and how ARM is useful, researchers must study ARM in different contexts. With ARM's many potentials in mind, such as the ability to increase brand trust, customer satisfaction, reduce risk, and facilitate decision-making processes, it can be argued one area where the potential value of ARM can be of high interest is within "high

involvement products” (HIPs). HIPs are products not frequently bought and that usually have a higher price, complexity, and emotional importance for the consumer, such as cars, technical devices, and household machines, making HIP purchases often associated with high risks and sunk costs when making faulty purchase decisions (Santandreu & Shurden, 2017; Zaichkowsky, 1986). Therefore, it is important for companies selling HIPs to provide their consumers with as much information as possible to facilitate the customer journey and reduce the perceived risk. As ARM tends to have certain opportunities overlapping the common challenges related to HIP purchases, it would be enriching for theory and practice to explore how consumers perceive this form of marketing in the HIP context. Hence, we know in-depth research is needed to gain knowledge about how consumers perceive ARM and why, for companies to know if they should invest in ARM or not (Chylinski et al., 2020). Moreover, concerning the time and effort invested by consumers when purchasing HIP, the possibilities of implementing this new technology to increase and facilitate the consumer’s HIP purchase experiences further are of high interest to managers (Kowalczyk et al., 2021; Rauschnabel, 2021). If learning when to invest in ARM based on the consumers' perception of engaging with it, companies can facilitate the customer journey even more to ultimately increase the brand relationships and trust, and thereby sales.

1.2 Research Purpose

The purpose of this study is to help bridge the existing gap in the literature regarding ARM about how it is perceived by consumers. The study will contribute to this gap by focusing on ARM in a HIP context to increase understanding and knowledge about if, when, and how ARM is efficient and value-adding. Consequently, we aspire to provide valuable insight for practitioners within the marketing field by exploring the perceived usefulness of ARM. Our work aims to lay out the current state of research and identify the missing aspects of the consumers' view on ARM in relevance to HIP by answering the questions:

How do consumers perceive ARM in the context of HIP, and why?

Can ARM be a useful tool for consumers when purchasing HIP? If so, how?

2. Frame of Reference

This section provides an overview of previous literature related to the field of ARM, HIPs and consumers' perceptions of AR. Key concepts necessary to comprehend the study as well as analyze the study's findings are presented, analyzed, and compared. Further, a theoretical contribution was made by compiling current ARM benefits and challenges in research. Finally, an analysis of ARM's potential in the promotion of HIP is presented.

2.1 Augmented Reality Marketing (ARM)

Companies and marketers have attempted different means to strengthen consumer experiences for decades. Ways to include the human's different senses into the experience and exposure of marketing campaigns, to increase the interest of the marketing message, is therefore of interest for practitioners (Rauschnabel et al., 2020). One way to try to increase the consumers' purchasing experiences is with AR (Sung, 2021). AR was initially explored in 1957 by Morton Heilig. Heilig invented "Sensorama", which by delivering visual, sound, scent, and vibration to the observer made the first attempt to add additional data to an experience. It was not computer-controlled, however, the beginning of what we today know as virtual reality (VR) and AR (Wedel et al., 2020). Today, AR can be explained as a tool extending and expanding a person's perception of his or her reality by overlaying digital elements on his or her physical world. It improves the user experience by using computer vision and object recognition to add digital content, such as graphics, video, and audio, to the user's real environment. Thus, rather than disconnecting users from reality, AR enhances their reality (Sung, 2021; Alimamy & Gnoth, 2022). When applying AR into business environments to improve the consumer journey, brand perception, and engagement, one usually refers to ARM. Accordingly, ARM can be defined as the creation, distribution, and communication of digital affordances in the physical world when aiming to impact the consumer's experience and decision-making (Qin et al., 2021; Berman & Pollack, 2021; Bleier et al., 2019).

ARM differentiates itself from other forms of digital marketing because of its embedded experiences, that is, digital experiences that seamlessly integrate digital content about for instance product images, instructions, and information into the consumers' physical environment (de Ruyter et al., 2020). The usage of AR by companies can be identified in

different environments. Several mobile AR apps have the goal to reduce the friction in online purchasing processes, by making it possible to test products at home, on the consumer, or on avatars. Consequently, the costs associated with online returns are reduced due to the facilitated fitting process (Wedel et al., 2020). Mobile AR apps are also used by firms to enhance the consumer experience by facilitating the fitting process in brick-and-mortar stores by involving in-store digital screens, holograms, and smart mirrors. Further, it is used to improve in-store navigation and online product search through geolocation combined with reverse image search (Berman & Pollack, 2021). Accordingly, ARM applications can be installed on stationary devices (for example, AR mirrors in stores), wearable devices (for example, AR glasses), and mobile devices (for example, smartphone) (Rauschnabel, 2021; Dwivedi et al., 2020).

An example of an AR device is Microsoft's HoloLens. It uses sensors and computer vision to scan its physical surroundings and create a real-time 3D map of the consumer's desired room. It then projects a realistic image of a piece of furniture in the consumer's view of that room (Chylinski et al., 2020). IKEA is one company using this technology in their app "Ikea Place". The goal with Ikea Place is to enable their consumers to digitally visualize IKEA's products at their homes before purchasing. Another example is Sephora who uses ARM on its website to facilitate purchasing processes with a tool called "magic mirror". With the magic mirror its customers can see how the makeup looks on them before ordering (Kumar, 2021). In both cases, ARM is used to minimize the gap between searching for goods online and in real life by providing technical assistance to experience the product's appearance. Companies can also use ARM for entertaining purposes. Volkswagen for example created its first ARM-app "Volkswagen Juiced Up" as early as 2012 with the goal to "bring life" to their advertisements. The app made it possible for Volkswagen's targets to scan a bar on Volkswagen's traditional advertisements from which they then entered a new platform where the same advertisement was brought to life with digital elements (Scholz & Smith, 2016). Another example of a company using ARM for entertainment was Burger King. They created an engrossing game "Burn That Ad" where their consumers were encouraged to find Burger King's competitors' advertisements and then virtually set these aflame with their smartphones. The more advertisements destroyed, the more coupons received (de Ruyter et al., 2020). Hence, with the diversity of purposes the implementation of ARM can have for companies as described above, it is clear AR can play a valuable role in integrated marketing programs (Kowalczyk et al., 2021).

2.2 Advantages and Challenges Related to ARM

By using AR as a marketing and sales tool, firms can change consumers' remote purchasing experiences as well as brand engagement (Wedel et al., 2021; 2021; de Ruyter et al., 2020; Hsu et al., 2021). As a result, companies, and managers are starting to recognize ARM's potential to disrupt the marketing industry, which has increased the interest in the technology (Sung, 2021; Rauschnabel, 2021). However, as with all technologies, both advantages and challenges exist. ARM is a rather new technique that has received increased attention by researchers in the last few years, but the literature is still rather limited. To the authors' knowledge, there have been no structured endeavors to summarize the current advantages and challenges of using AR as a marketing tool to impact branding and sales to this date. A review of the existing literature on ARM discloses several advantages and challenges related to ARM, which we grouped into three categories. This categorization is conducted to provide a grasp of the overall potential of the technique and thus contribute to the literature. The categories are discerned as follows: (1) Experiential: referring to time savings, convenience, information value, and quality of information. (2) Emotional: relating to creating a sense of trust, aesthetic quality, and satisfaction. As well as, shaping consumer behaviors, forming attitudes, inspiring, and building stronger relationships. (3) Economic: being reduced sales-related expenses such as returns because of the increased product experience and the increased willingness to purchase.

2.2.1 Experiential

2.2.1.1 Experiential Advantages

One of the most prominent goals in today's retailing environments is the creation of superior customer experiences. To achieve effective online experiences, it is important to overcome the physical separation between products and consumers through well-designed digitally enhanced product presentations, which ARM provides (Bleier et al., 2019). Mobile AR apps can reduce the friction in the purchasing process by making it possible for consumers to "try out" all kinds of products. For instance, one can try jewelry, clothing, shoes, and cosmetics on oneself and furniture and interiors in one's home. One can also virtually walk through real estates, museums, hotels, and tourist sites to experience new places (Wedel et al., 2020). Extant research also shows consumers tend to experience AR to help them save time during the decision- and purchase phase. This is mainly because consumers tend to feel information obtained via AR is of better quality compared to other sources of information, such as photos. Moreover, AR

increases convenience as it enables trying all kinds of products at any place (Berman & Pollack, 2021; Rauschnabel et al., 2022; Wedel et al., 2020; Kowalczyk et al., 2021). In sum, consumers' full experience is improved with AR as it increases the authenticity and interactions which in turn influence consumers' perception (Alimamy & Al-Imamy, 2021). ARM facilitates the purchase process by enabling the consumer to experience products in new ways before purchasing, which in turn can improve the consumer's overall post-purchase satisfaction of the product, while also being entertained in the pre-purchase phase (Daassi & Debbabi, 2021; Sung, 2021; Rauschnabel, 2021).

AR-based experiences are further argued to be more persuasive than other forms of online presentations of products since it offers opportunities to provide consumers with innovative solutions enriching their product experience. Accordingly, consumers tend to experience that AR makes the product more "real", which generates a positive attitude towards the technology. This in turn reduces their resistance to online shopping as well as increases their engagement (Daassi & Debbabi, 2021; Hsu et al., 2021). Effective consumer engagement strategies develop long-term relationships with consumers, which create sustainable competitive advantages. Thus, AR technology can be integrated by organizations into established marketing approaches to increase its effectiveness. An example is to combine mobile app marketing with AR app marketing to target consumers on their hand-held devices as nearly all mobile devices possess the necessary technology to run AR (Rauschnabel, 2021; Wedel et al., 2020).

Javornik et al., 2019; Smink et al., 2020; and Hinsch et al., 2020, argue AR can increase consumer flow experiences and provide utilitarian and hedonic benefits, as well as, high levels of satisfaction and inspiration. Hsu et al. (2021) discuss in more detail how AR influences consumer attitudes and divides the experience into utilitarian and hedonic values. Utilitarian value refers to functional, practical, and informative values, whereas hedonic value rather focuses on excitement, joyfulness, and entertainment values. Research indicates consumers find more hedonic value in AR rather than utilitarian value and that the intention to reuse AR apps is mainly based on the hedonic experience. Dodoo and Youn (2021) argue entertainment is the most common reason why consumers use AR-related functions online. Hence, developers and practitioners of AR are assumed to benefit from providing exciting features that increase the consumers' emotional responses since it is more likely to form positive attitudes and increase their willingness to adopt the technology (Hsu et al., 2021). Further, consumers' perceived

coolness and enjoyment of social interactions can to a great extent act as motivators for adopting AR as it improves the experience (Dodoo & Youn, 2021).

2.2.1.2 Experiential Challenges

Viewing the challenges of using ARM concerning the consumer's experience with the brand, one of the most recognized is the technical barriers to understanding how to engage with the ARM platform (Berman & Pollack, 2021; Kumar, 2021; Scholz & Smith, 2016). The attitude towards AR has been found to be highly dependent on the consumer's experience of the technology as well as the individual technical skills in general. Consumers familiar with AR usually develop either a positive or negative attitude towards it while unfamiliar consumers tend to be more neutral (Arghashi & Yuksel, 2022). Hence, consumers' hands-on experience forms the attitude to a high degree and it can be assumed that to fully explore consumers' attitudes towards AR there must also be some interaction with the technology involved. Based on this, consumers' first hands-on experience will likely form the attitude to a high degree which might be difficult to change forward. Therefore, organizations face the challenge to provide a good first impression to keep consumers positive about the technology. The use of ARM has been argued to not be mainstream despite significant investments in the technology. Some argue this is partly because consumers have reported the application does not live up to the hype (de Ruyter et al., 2020). Corporations targeting early adopters of new technologies have an advantage here, as these consumers are more likely to download and use the application required for participating in the ARM campaign (Scholz & Smith, 2016), whereas firms targeting a less technologically audience might have a higher barrier to engage their consumers with the technology (Kowalczyk et al., 2021).

Another challenge for organizations is to decide which party, the consumer or the firm, is going to activate the AR layer, also referred to as the *trigger*. Here, managers make a decision that shapes the user's experience and the amount of control the marketer has over the ARM platform. If the marketer triggers the AR layer for the consumer, he or she has control of who participates in the ARM experience, and at what time and place. Hence, if the marketer triggers the ARM, the consumer does not need to take deliberate action to be exposed to it, which reduces the friction and potential resistance of initiating the ARM experience. This method is particularly useful when the goal is to create awareness. However, when the consumer is the one in control over when and how often the AR layer is activated, it is more likely the user will

receive a positive picture of the AR content and explore it in further detail, which results in a better experience (Scholz & Smith, 2016).

As aforementioned, research has found ARM provides a greater portion of hedonic value for consumers while utilitarian motivations such as informative and functional value were rated as a motivation for using AR by just 2% of the respondents in a research (Dodoo & Youn, 2021). As a result, it might become a challenge for marketers to have consumers perceive ARM as informative and useful, and make the functional benefits of ARM become a motivation for adoption and use. However, it should be noted that despite consumers today seeming to view the hedonic value higher, the potential of using AR for utilitarian purposes has not been as extensively explored in research to this date. ARM has a number of opportunities and advantages related to authenticity and creating improved product experiences to minimize the perceived risk of decisions for instance (e.g. Rauschnabel et al., 2022; Alimamy & Al-Imamy, 2021; Hinsch et al., 2020; Rauschnabel, 2021; Kumar, 2021). These advantages often relate to making more informed decisions which strongly relates to utilitarian value and ARM could therefore have the potential to be useful in important decisions of meaningful and personal products such as HIPs. Research exploring the perception of ARM in specific contexts, such as HIPs, would therefore be enriching to literature as well as practitioners as the perception of the technology might differ depending on the product in mind. This could potentially help overcome the current challenge identified within the literature on ARM by providing further information on how consumers perceive ARM and why.

2.2.2 Emotional

2.2.2.1 Emotional Advantages

By integrating digital information into an individual's perceptions of the physical world, ARM can shape consumer behavior to support sales, branding, and customer service delivery strategies (Sung, 2021). It also helps creatively engage the consumer and inspires them, which embraces the customer experience and thereby forms a positive attitude towards the brand (Kumar, 2021). One can also say AR reduces the flow of information that must be processed through mental imagery by consumers. Hence, AR can help web-based transactions better simulate in-store experiences which is advantageous for organizations (Berman & Pollack, 2021). The increased experience and interaction with the product enabled by ARM also builds

loyalty and trust that the product will meet one's expectations (Daassi & Debbabi, 2021; Rauschnabel et al., 2022; Hsu et al., 2021). Overall, an improved experience and facilitated decision processes are found to be determinants for forming positive attitudes towards AR (Watson et al., 2013)

Alimamy and Gnoth (2022) state companies commonly stimulate co-creation through personalization within online settings in a 2D plane. ARM facilitates this co-creation process through enhanced personalization within self-service settings by providing meaningful and contextually rich content encouraging deeper engagement and interactions. Hence, ARM provides aesthetic quality and media enjoyment, which can positively influence the consumers' engagement and satisfaction (Berman & Pollack, 2021). It is also argued that effective consumer engagement strategies develop long-term relationships with consumers, which create sustainable competitive advantages (Wedel et al., 2020).

2.2.2.2 Emotional Challenges

Negative attitudes to technologies of this type usually relate to privacy. Consumers who value their private data and view their smartphones as highly personal tend to find new technologies as intrusive, which negatively influences their attitudes towards them (Watson et al., 2013). Despite new technologies continuously becoming part of our everyday life, people feel more vulnerable using them. Almost all ARM platforms require access to the user's phone camera to implement the digital elements in his or her surroundings. As a result, the platform receives information about how the consumer and their home looks, alongside all other personal data information commonly stored about the consumer that he or she to some extent is resistant to hand out (Urbonavicius et al., 2021). From this perspective, ARM can be viewed as a bit intrusive, with people experiencing it difficult to control their personal data. The perceived intrusiveness has a great impact on the attitude towards the brand and usage of new technology and therefore, consumers with high privacy concerns can generate negative emotions and develop a negative brand attitude if ARM is used (Kumar, 2021). Hence, organizations implementing ARM face a potential barrier in providing a technology facilitating and enriching the evaluation and the perceived authenticity, which often involves personalization or use of personal information, while at the same time avoiding becoming too personal making the consumer feel unsafe.

Second, depending on how good the ARM platforms are, the perception of a product can be misleading in a way both benefiting and disfavours the consumer which also influences their feelings towards it. If the product is not as good as perceived in the ARM platform, the consumer becomes both dissatisfied and doubtful of the brand. The product could also feel better in real life, which then creates the opposite feeling but might decrease the trust in ARM (Daassi & Debbabi, 2021; Kowalczyk et al., 2021; Qin et al., 2021). This is a challenge with implementing ARM for organizations. The goal is to give the consumer a “real-life experience” with the product despite not interacting with the product in “real-life”, which accordingly cannot be fully achieved since ARM does not interact with all human senses.

2.2.3 Economic

2.2.3.1 Economic Advantages

A major benefit of ARM recognized in literature is the reduction of sales-related expenses as a result of increased consumer engagement and satisfaction which becomes an advantage for both organizations and consumers (Alimamy & Gnoth, 2022; Wedel et al., 2020; Scholz & Smith, 2016). Marketers can use ARM both in traditional advertisements, sales associates, as well as to upsell, close-sale, and cross-sale (Berman & Pollack, 2021). By facilitating the fitting process in brick-and-mortar stores, ARM helps reduce the costs associated with returns in online retailing (Wedel et al., 2020). Hence, an organizational benefit is its ability to increase consumer engagement and satisfaction, while reducing sales-related expenses (Berman & Pollack, 2021). Engaged consumers are also recognized to purchase more frequently and make more transactions per purchase (Wedel et al., 2020). Thus, AR is increasingly heralded as a strategy to add value and improve incremental sales. An example can be illustrated by the shoe brand Converse which uses an app to stimulate purchases of the latest designer sneakers. By pointing a smartphone’s camera toward one’s feet, the consumers can see how the shoes virtually look on them. Subsequently, the consumer has the option to buy the sneakers by using a “buy now” function in the AR application (de Ruyter et al., 2020).

From the consumers’ perspective, ARM can also result in economic benefits through better informed purchase decisions. One does also reduce the risk of high sunk costs such as unnecessary time spent and shipping fees (Liu et al., 2020). Money is a fragile resource for

many, and if ARM can help the consumer increase their satisfaction with their spent money, it becomes beneficial both for them and also the environment.

2.2.3.2 Economic Challenges

Despite the estimated revenues and loyalty-enhancing benefits, few companies have chosen to use and implement AR in their marketing programs (Berman & Pollack, 2021). One reason is the lack of established ARM tools within the industries (Rauschnabel et al., 2022). Another challenge, as with all new technologies and digital channels, is the complexity of deciding whether and when to use the technology to ensure it pays off. Incorporating a new digital technology could generate more sales and create a sustained competitive advantage (Sung, 2021; de Ruyter et al., 2020; Sihi, 2018; Daassi & Debbabi, 2021), however, the organizations might not possess the tangible or intangible resources necessary, such as skills, technical processes, and money, for successful ARM implementation. The net payoff depends on the ARM performance effects on the entire channel system, thus, how the technology is influencing the total purchase experience. If not effective enough, ARM would rather create spillovers negatively influencing the purchase experience and perception of the brand (Sridhar & Fang, 2019). This could lead to the firm spending unnecessary capital short-term by investing in the ARM platform, but also losing capital long-term due to customers being dissatisfied with the purchasing experience.

If looking at today's research, findings underline AR has the potential to disrupt the marketing industry. However, there are also risks with investing in current AR technologies as these are still under development. Yet, one does not know what future technologies will look like and the possibilities ARM brings cannot be ignored due to its disruptive nature. This is an identified challenge most managers within business face: understanding what new technologies to invest in, and when (Rauschnabel, 2021; Sihi, 2018; Sung, 2021).

Table 1

Summary of advantages and challenges related to ARM

	Advantages	Challenges
Experiential	• Improved overall experience • Entertaining • Increased authenticity • Facilitates trying products • Facilitates the purchase process • More persuasive than other marketing • Reduced resistance to online shopping • Reduced friction of reality and imagination	• Technical barriers • First impression • High expectations • Trigger points • ARM informative value
Emotional	• Increase engagement • Increase inspiration • Improve brand attitude • Reduced flow of information • Increase trust • Increased satisfaction • Improved consumer-brand relationship	• Privacy issues • Intrusive • Security concerns • Risks of misleading perceptions
Economic	<i>Organizations</i> • Reduced sales-related expenses • Reduced costs related to returns • Increase the purchase frequency <i>Consumers</i> • Better informed decisions • Reduce sunk costs	<i>Organizations</i> • Lack of tangible resources • Lack of intangible resources • Lack of economic predictions

2.3 High Involvement Products (HIPs)

One way to separate between today's enormous heterogeneity of products is by looking at the consumers' involvement in the product, referred to as high- and low-involvement products (Liu et al., 2020). In this thesis, the aim is to explore consumers' perceptions of ARM within the context of HIP, as it is believed ARM might provide high value for these products. Involvement is defined as the perceived importance and relevance individuals establish with a product based on the consumers' individual needs, values, and interests (Liu et al., 2020; Drossos et al., 2014). However, the definition of high- and low-involvement products is complex. Various definitions exist and practitioners refer to different assumptions about both products and consumers when arguing for their precept.

2.3.1 Defining HIP through the consumer's personal relevance

Zaichkowsky (1986) claims two underlying factors determine how a product is classified. The first factor is personal relevance which basically means that the consumer's needs, values and

perceived relevance will affect how a consumer views the product. Second, products differentiating from other available offerings in the market increase the involvement since it gives greater room for comparisons and might require active evaluation of similarities and differences. The perspective from Zaichkowsky has been adopted widely and evolved further. Researchers undertaking this view on classifying HIPs usually argue emotionally important products that are lasting and personal in nature are considered highly involving. Accordingly, the perception of what a HIP is differs among individuals. Hence, these practitioners argue that more product-specific factors such as price should not be considered as a determinant factor alone in whether a product will be considered a HIP or not (Zaichkowsky, 1986; Sihi, 2018).

2.3.2 Defining HIP through the product's characteristics

Another side of literature that has emerged more recently argues products can be separated by the characteristics of the product and is not as much dependent on the consumers' perception. Instead, it is assumed certain product characteristics have in common that they generate the perception of importance and personal relevance from consumers. For instance, the product's complexity, price, and expected lifetime do influence whether a product will be considered as low- or highly-involving. Products that are long-lasting, complex, and expensive are considered HIPs as the cost of making a poor purchase decision then becomes higher (Liu et al., 2020). As often in research, there also exists an intermediate position. Bojanic and Warnick (2012) argue the aforementioned product characteristics such as price, complexity, and product lifetime are important factors to determine the involvement, and the higher each of these are, the higher involvement can be assumed. However, they also argue the time spent on making the decision, including information search and evaluation, matters and that products are not involving per se. The level of involvement is instead rather determined based on the actual situation combined with consumers' values and perception of these product characteristics.

2.3.3 Defining HIP through the decision-making processes

An additional perspective on involvement commonly used to classify whether products are highly involving is to zoom out and look at the entire purchase process, as different levels of involvement can result in that purchase and decision-making processes differ (Liu et al., 2020). The decision-making process for HIPs is argued to follow a rational process that is time-consuming, complex, and requires effort in problem identification, problem-solving, brand

evaluation, and information search (Nayeem & Casidy, 2013; Santandreu & Shurden, 2017). When consumers experience a higher level of involvement, they become more motivated to spend time and be attentive to each step of the purchase's process. Hence, these consumers tend to search for information and actively take action to find the necessary means to evaluate and make a well-informed decision (Liu et al., 2020; Drossos et al., 2014; Santandreu & Shurden, 2017; Griffith et al., 2001). This means that consumers are aware of all advantages and disadvantages of the options which might refer to price, quality, innovation, and durability (Nayeem & Casidy, 2013). Defining HIP based on the purchase process also takes an intermediate position of Zaichkowsky (1986) and Liu et al. (2020) as it relies on a more effortful process based on the consumers' perception of the importance of the decision. The more important the purchase is to the consumer, the more involving the product becomes. However, quantitative factors such as price, durability, and complexity might be part of the information search, evaluation, and comparison without being single determinant factors for HIPs.

2.3.4 Concluding the definitions of HIP

Many definitions and meanings related to the term involvement exist in literature. As researchers have tried to understand consumer behaviors related to belongings and products, involvement has grown to become a key concept as it influences and forms consumers' attitudes towards objects and advertisements (Bojanic & Warnick, 2012; Griffith et al., 2001; Drossos et al., 2014). When reviewing the literature, it becomes clear that despite the term involvement being to some extent a personal construct since products can be highly involving by one person while the same product might be considered as a low involvement product when asking another, it is obvious that the level of involvement is not a random and unpredictable occurrence. Whether a product is low- or highly involving is not based on entirely unique factors of an individual. Rather, there is some consensus on the separation of the two levels (Martin, 1998). Hence, independent of how the classification of products is made, a consensus in the literature exists regarding what products are considered as low- or high-involving. Examples of products with low involvement are groceries, sun lotion, books, and cigarettes while cars, technical devices, jewelry, and appliances are assumed to be HIP (Zaichkowsky, 1986; Liu et al., 2020; Santandreu & Shurden, 2017; Nayeem & Casidy, 2013). In this study, HIPs are defined as products with characteristics perceived as personal and emotionally important for the consumer so that the cost of making a poor decision becomes high. This can as a result be different products for different people.

2.4 Digital Marketing for HIPs

Internet is by far the most used source for information search today and is argued to be the most efficient medium to communicate with consumers. Consequently, digital marketing content has become one of the most common techniques for advertising HIPs, among other products. Digital marketing content can be defined as content based on the desire to add value for consumers and ease the acquisition or retention through online and/or social media. It can take a number of different formats such as videos, podcasts, e-newsletters, virtual content, webinars, and infographics (Stewart et al., 2019; Bart et al., 2014; Lou & Xie, 2021; Hollebeek & Macky, 2019). This implies marketers today use new technologies to enhance and support consumers' decision-making processes (Nayeem & Casidy, 2013; Sihi, 2018). Hence, using technologies in marketing has become more or less the standard for companies as it enhances the purchasing process and gives consumers the ability to obtain information almost in real-time. It has been found that it is especially important for companies promoting HIPs, and Sihi (2018) even argues it is essential for companies with HIP offers. As a result, ARM is found to be especially appropriate for HIPs since it enables consumers to view contextual products where color, size, and style matter (Haumer et al., 2020).

The term engagement has for a long time been a key metric in digital marketing, but what research recently has emphasized to not be overseen is also the consumer's involvement (Stewart et al., 2018; Lou & Xie, 2021). It has been shown that consumer involvement has a great impact on consumer perceptions, behavior, and purchase intention but it is sometimes overseen that this might also mean the effect of digital marketing is perhaps not the same for high- and low involvement products (Liu et al., 2020). As consumers' options to receive information are extensive, their perceived personal relevance and involvement are also essential to fully understand the potential of digital marketing. Advertising for HIPs tends to draw more attention compared to low involvement products regardless of the medium used for advertising. On television and the Internet, for instance, consumers pay a significantly higher degree of attention to advertisements for HIPs (Radder & Huang, 2008). With the aim to understand how involvement impacts digital marketing, a review of the current state of literature revealed three categories: marketing engagement, marketing content, and attitudes towards marketing. Consumers' level of involvement can be argued to influence each of these three areas which should be taken into consideration both in literature and by practitioners.

2.4.1 HIP Marketing Engagement

Research states that highly involved consumers tend to spend more time reading, processing, and evaluating advertisements. As a result, HIP advertisements generally generate greater attention and engagement (Bart et al., 2014; Lou & Xie, 2021; Trivedi et al., 2019; Drossos et al., 2014). When consumers perceive the products as highly relevant and find a higher risk of making the wrong decision, the effort to obtain necessary information increases (Stewart et al., 2019; Liu et al., 2020). As consumers become more involved, they tend to process the information from promotional messages at a deeper level while also aiming to connect with the information provided at a personal level (Trivedi et al., 2019). Further, while consumers use the Internet and are exposed to advertising, they are more likely to click on banner ads and interact with brand websites if the involvement of the intended purchase is higher (Drossos et al., 2014). Hence, HIP advertisements tend to be more engaging as consumers more often look beyond the advertisement itself as they aim to deepen the evaluation. In summary, as HIPs increase the motivation for information search it indicates that the consumers' willingness and effort to engage with advertisements online can increase as well.

2.4.2 HIP Marketing Content

The degree of consumer involvement is found to be an important determinant of what content should be communicated (Radder & Huang, 2008; Liu et al., 2020). It is argued advertising of HIPs should focus on providing informative- rather than emotional value as it facilitates the evaluation process. Informational messages focus on providing consumers with objective information and descriptions of the product features while emotional messages aim to drive affective responses by using love, humor, happiness, and so forth to trigger reactions (Trivedi et al. 2019). As consumers seek to minimize the risk of poor decisions and become more eager to find information, informative messages are to be preferred. Emotional and entertaining messages can be useful as it improves the overall brand experience but is argued to not be as relevant for HIPs as the consumers mainly seek to find useful information to base their decision on rather than being entertained. Hence, the higher personal importance a product has, the lower value is put on the entertainment of the advertisement (Lou & Xie, 2021; Stewart et al., 2019; Trivedi et al., 2019). Stewart et al. (2018) take a slightly different perspective as they argue the involvement within the product market is equally important as the consumers' involvement with the specific product. For consumers not familiar with the market for the product,

advertisements should focus on informational messages and aim to increase the search intention while marketers should focus on brand attitudes when communicating with well familiar consumers (Stewart et al. 2018).

Digital marketing can, despite the formatting of the advertisement, also undertake different tactics where push-based advertisements refer to communication that is initiated by marketers and exposed to consumers who then decide whether they will decode the message or not. Second, pull-based advertisements are initiated by the consumer itself and can take place in the form of QR-codes or links that the consumer him- or herself decides to engage with. The latter is found to be more efficient for HIP advertisements as these consumers are as aforementioned more motivated to actively search for information (Trivedi et al., 2019). Lastly, research indicates that online advertising for HIP should have a higher temporal distance, meaning that the promotional messages should be released earlier to give consumers time to process and evaluate the information (Liu et al., 2020).

2.4.3 Attitudes Towards HIP Marketing

When it comes to attitudes towards advertising, as aforementioned, HIPs usually imply that consumers tend to perceive the risk of purchase as higher, thus, they search actively for information to make the best decision. This also influences the perception and acceptance of advertising (Trivedi et al., 2019). High involvement usually results in consumers being more positive towards being exposed to the advertising content, mainly based on the assumption that the advertisement might add value to the end-decision. Therefore, it becomes viewed as less intrusive and disturbing compared to advertising for low involvement products (Drossos et al., 2014; Liu et al., 2020). In research conducted by Radder and Huang (2008), it was found that consumers tend to choose purchasing from brands that are well-advertised when they are about to purchase a HIP. This indicates that the value of online marketing, in general, might be both more efficient and appreciated by consumers. The attitude towards an ad is in turn found to have a great impact on the engagement and intention of purchasing the product (Doodo & Youn, 2021). As the overall attitude towards the advertisement is argued to be rather central in how consumers choose to behave after being exposed to the ad, it can be assumed that digital marketing for HIPs then has a greater potential to be accepted compared to advertising of low involvement products as the advertisements can add information facilitating the time

consuming and complex purchase decision as previously mentioned. This further opens up the potential of ARM in the context of HIP.

2.5 Compilation: Is ARM relevant for HIP?

HIP and ARM represent two important but also complex concepts for today's consumers and firms. As consumers purchase HIP, they invest time and effort into the purchase decision to minimize their sunk cost (Nayeem & Casidy, 2013; Liu et al., 2020; Santandreu & Shurden, 2017). Concurrently, ARM is becoming increasingly common, with companies investing in the technique to simplify the consumer's journey (Berman & Pollack, 2021; Sung, 2021). The relevance of ARM in the context of HIP is however unexplored this far.

As aforementioned, products perceived as personally and emotionally important for the consumer can be classified as HIPs. These products usually share several characteristics such as high price, high complexity, and long lifetimes. Not surprisingly, marketing tactics for these products differ from other types of products with lower involvement in terms of advertising engagement, advertising content, and the overall attitude towards the marketing messages, as the consumer journeys for these products differ (Liu et al., 2020; Bart et al., 2014; Lou & Xie, 2021; Trivedi et al., 2019; Drossos et al., 2014). For instance, consumers tend to actively seek information as well as evaluate and compare product features since the cost of a poor HIP decision is perceived as high, and that is something ARM has the potential to help with. Primarily, because it enables the consumer to see the HIPs in the consumer's own environment and not only in a picture. As a result, it is easier to compare and experience the product.

ARM distinguishes itself from other digital marketing tactics due to its embedded experiences (de Ruyter et al., 2020). As explained, high involvement often equals a higher degree of motivation for consumers to spend time on the steps of the purchase process to assure making the best decision. At the same time, current research suggests that ARM can enable consumers to make well-informed decisions, increase trust, satisfaction, and convenience, provide informational and quality value, reduce cost and save time while also being entertaining, due to the AR's features of experiencing the product in a new way through digital devices in the step before purchasing (Berman & Pollack, 2021; Wedel et al., 2020; Daassi & Debbabi, 2021; Sung, 2021; Rauschnabel, 2021). This supports the potential of ARM in the promotion of HIP.

Additionally, pull-based marketing, where the consumer him- or herself actively chooses to utilize technologies or participate in marketing activities, is argued to be especially relevant for HIPs as it has the potential to provide the consumers with information to facilitate and reduce the perceived risk involved with the purchase decision, which further supports the relevance between ARM and HIP (Trivedi et al., 2019).

There is research stating that advertising for HIPs should focus on providing informative value rather than being entertaining, to obtain its maximal effect. This is since the more personally important products are perceived, the lower value is put on the entertaining aspects of the marketing messages (Trivedi et al., 2019; Stewart et al., 2019; Lou & Xie, 2021). At the same time, it is argued consumers find a higher entertainment than informative value in AR (Dodoo & Youn, 2021). This would perhaps lead to the conclusion that ARM is not essentially suitable for HIPs. However, research also indicates ARM possesses several attributes and brings advantages for consumers relating to for instance increased consumer trust, decreased perceived risks, and facilitated product purchase processes, which indicate it would be beneficial to implement it as a marketing tool for HIPs to enhance the usually extensive buying process of these types of products. Further, ARM helps consumers save time in their information search since they are allowed to explore the product in a more “real” context, which in turn can reduce sunk costs in terms of time, shipping, or returns (Liu et al., 2020). Accordingly, it can be argued that the qualities of ARM’s potential to improve marketing for HIPs cannot be neglected. While current research to some extent contradicts itself concerning ARM and its efficiency in HIP, there is a lack of understanding whether consumers perceive ARM valuable for HIPs regardless of utilitarian (informative) or hedonic (entertaining) values. ARMs suitability has not received attention in research and it has not yet been explored how consumers perceive ARM in the context of HIPs.

3. Method

This chapter starts with presenting the method of the Frame of Reference and the methodological background in light of our philosophical orientation. Thereafter, a detailed explanation of the study's qualitative nature is provided covering the data collection, sampling, structure of interviews and observations, as well as, data analysis. Finally, the study's quality and ethical implications are discussed.

3.1 Method: Frame of Reference

To acquire relevant research to this Frame of Reference, literature on the studied topic was identified, analyzed, and summarized using peer-reviewed articles from the databases Scopus and Primo. Initially, a five-year period was selected to gain the most updated literature. However, fundamental concepts and models emerging in literature were also included due to their expected value and contribution to the study's purpose. We started the process by deciding upon which search parameters to use, which are presented in Table 2. While skimming the articles received in the initial searches, it was identified that benefits and opportunities relating to ARM were a common denominator. However, consumers' attitudes toward using ARM as a tool facilitating purchase decisions had not been shed light. Consequently, the interest in understanding consumers' perceptions of ARM in the context of HIP arose.

Upon collecting the initial selection of literature, articles were again read to further narrow it down to the most relevant scope. While reviewing the research, a keyword table was developed to increase the scope of significant hits. The key concepts "Augmented Reality Marketing", "high involvement products", and "consumer perceptions" were divided into synonyms, alternative spelling, and related, broader, and narrower terms to maximize the hits (see Appendix A). Further, the keywords were combined by using OR, AND, and NOT to find articles relating to all three key concepts. Only articles from journals with an impact factor equal to 3 or above were used to ensure the research acting as a base for this study is perceived as important and relevant for other researchers as well (Collis & Hussey, 2014). The chosen articles were summarized in a document with comments and tables of the main findings, key points, and theories as shown by an example in Appendix B. With these articles, we then

compiled the Frame of Reference by moving between different authors' ideas and identifying similarities and differences. Thereupon, a comprehensible analysis was made comparing the different perspectives of ARM and HIP.

Table 2

Overview of Search Parameters

Search Parameters for Frame of Reference	
Databases	Primo (from Jönköping University's Library), Scopus
Main Keywords	Marketing OR advertising AND AR AND Consumer perceptions. Marketing OR advertising AND AR OR ARM. Purchase Decisions AND high involvement products. ARM AND purchase AND consumer attitudes. Consumer AND attitudes OR perceptions AND AR OR ARM. AR AND high involvement products AND consumers Digital marketing AND high involvement products ARM AND high involvement products
Language	English
Sources	Peer-reviewed articles with an impact factor over 3

3.1.1 Method for identifying themes in 2.2 Advantages and Challenges with ARM

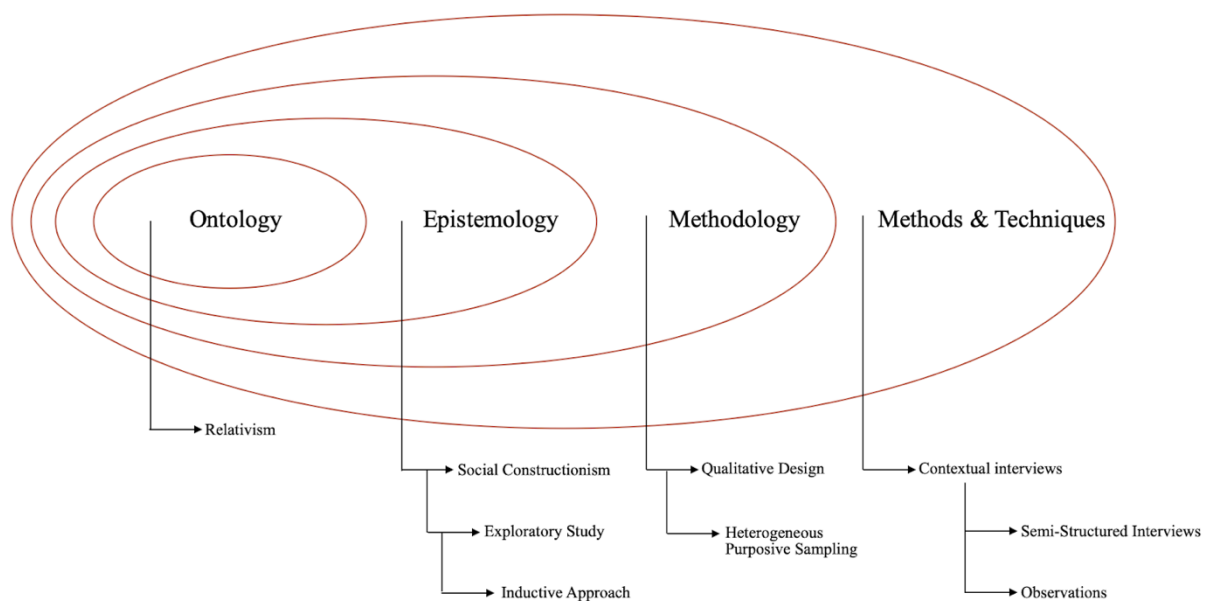
As part of the Frame of Reference, we also presented a review of current advantages and challenges of using AR as a marketing tool found in the extant literature, with the aim to provide a theoretical contribution as no structured attempts to summarize these have been made to our knowledge. After reviewing the research, it was recognized that the advantages and challenges could be grouped into three categories: experiential, emotional, and economic. These categories were identified by skimming through articles related to ARM. The ones elaborating on its positive and negative aspects were summarized. Thereafter, the identified advantages and challenges were extracted, coded, and clustered into subcategories. Thereupon, three themes were recognized. To give an example: “engagement, satisfaction, inspiration, entertainment, and personal” became *Emotional*. “Time savings, convenience, quality of information, technical barriers, and interactivity” became *Experiential*, and “increased willingness to purchase, and reduced sales-related expenses” became *Economic*. The advantages and challenges related to each theme are presented in section 2.2 (*Advantages and Challenges with ARM*).

3.2 Research Philosophy

An overview of our research philosophy is presented in *Figure 1*, inspired by the research onion originally presented by Easterby-Smith et al. (2018).

Figure 1

Research Onion, built on Saunders et al. (2016) and Easterby-Smith et al. (2018)



Looking at ontology, we adopted a relativist approach. It implies that multiple truths exist and that these are dependent on the perspective of the observer. To understand the overall attitudes towards ARM in HIP decisions, we built our theory upon varying opinions from consumers. Thus, multiple perspectives and individuals' perceptions of reality were crucial to gain reliable results, since all people's "truths" are based on different circumstances, perspectives and interpretations (Easterby-Smith et al., 2018). Hence, the ontological stance derives from the study's purpose and fact that the research questions are not measurable. Instead, the answers depend on which perspective it is observed from, which in this case is the consumer (Saunders et al., 2016).

In line with the relativist ontology, our assumption is that there might be multiple realities and that our study requires the evaluation of different perspectives. This aligns with the social

constructionist epistemology. Data is not aimed to be objectively collected and analyzed, instead, it will be interpreted in relevance to its context to contribute to the development of new theories concerning consumers' perceptions of ARM in the context of HIP. Hence, we aim to contribute to theory by incorporating a combination of multiple perspectives and thereby build knowledge rather than solely validating it (Easterby-Smith et al., 2018).

3.3 Research Design

In line with the social constructionism epistemology, and based on our philosophy, identified research gap, and research questions, we chose a qualitative research approach as it is highly appropriate when the purpose is to build theory rather than testing it. Qualitative methods enable exploration of how individuals make sense of their reality by for instance collecting different perspectives and experiences from individuals. Hence, it allowed us to gain an understanding on how ARM is perceived by consumers in a HIP context. From the participants' individual perspectives we could later identify emerging patterns (Easterby-Smith et al., 2018; Patton, 2015). The flexible nature of qualitative research allows different research paths to be discovered during the data collection process, which were beneficial for us due to the novelty of the topic. It also allowed us to receive primary data and comprehensive information, which were needed to meet the purpose of this study, namely: to explore how consumers perceive ARM in the context of HIP, and most importantly, why.

Following the qualitative research approach and our purpose, this study undertakes mainly an inductive approach. As we have no previous assumptions that can be approved or invalidated, but instead theorize data and identify new findings within ARM, it supports that an inductive approach is applied (Collis & Hussey, 2014). However, it should be noted that as previous literature within the topic of ARM, as presented in the Frame of Reference (Chapter 2), act as a guidance for our contextual interviews and analysis of data it cannot be claimed there are no deductive influences as well. Still, it can be argued that the inductive approach is more prominent in this study as we build new theories based on our empirical data, going from the specific to the general. Given the limited extant literature regarding consumers' perception and attitudes towards ARM, and identified gaps regarding ARM in the context of HIP, the nature of this study is exploratory. Exploratory research is common in qualitative research when the

goal is to gain a better understanding of a rather new field, which coincides with this study's purpose.

With the study being exploratory, the study contributes to existing research by identifying new insights within a rather unexplored field. In line with the study's qualitative nature and exploratory purpose, a combination of semi-structured interviews and observations through contextual interviews was chosen as the appropriate method (Easterby-Smith et al., 2018). With the aspiration to gain a wider perspective of consumers' perception of ARM in the context of HIP, 20 participants were interviewed and acted as the basis for the study

3.4 Data Collection

3.4.1 Primary Data Collection: Contextual Interviews

We used contextual interviews to collect primary data as it allowed us to interview and observe the participants while they also interacted with the ARM applications. Contextual interviews are found to be a method especially suitable when the full understanding of a topic involves other people or as in our case, processes that must be observed to be fully understood (Duda et al., 2020; Holtzblatt & Beyer, 2017). Hence, contextual data collection is advantageous if the aim is to see the usage of a service or device in a more real-life context as well as learn about the benefits, possibilities, and potential barriers experienced by the user (Holtzblatt & Beyer, 2017). To get a more thorough view of consumers' perception of ARM in the context of HIPs, it was of relevance to let the participants interact with the technology so that they could discuss their hands-on experience and develop an attitude towards it, rather than solely base their answers on beliefs and intentions.

The contextual design means we combined semi-structured interviews with observations. Hence, received the participants' perceptions of ARM via profound discussions while also having the opportunity to collect real-time data and spontaneous comments via observations of the participants interacting with ARM applications. The semi-structured interviews imply a deeper exploration of respondents' thoughts, allowing for new ideas to be recognized throughout the interviews (Collis & Hussey, 2014). It is also suitable in qualitative research as it helps answer the questions' "how" and "why" (Azungah, 2018). To meet the aim of this study and follow the interpretive design, open-ended questions were used as it allowed follow-up

questions that enabled fostering the exploration of the relevant topic and receiving more detailed information. Also, probings and ladderings were used, which is a technique where one asks follow-up questions such as “why” and “how” to help the interviewee explain and build upon their responses. In turn, one gains a deeper understanding of the interviewees’ perceptions. This is important when adopting a social construction philosophy, as it aims to understand the meanings the participants ascribe (Collis & Hussey, 2014).

The observational data collection enabled us to open up additional ways to obtain qualitative data by observing interactions while also exploring *why* reactions or activities pursued in a certain way (Easterby-Smith et al., 2018). Hence, the observations enabled us to gain a nuanced understanding of the participants' direct feelings, attitudes, and thoughts also under active usage. Data collection through observations can undertake several approaches that differ in how the role of the observer is performed. In this study, we as observers remained detached from the activities performed by the informants. However, our role as observers as well as the purpose of the study was clearly stated to the informants, and where suitable, we participated by asking for clarifications or questions as informants expressed specific valuable information. This allowed us to be focused on our role as observers in relevance to the study’s purpose, while also interacting with the informants and having conversations around relevant insights as these occurred. This approach of observation is referred to as observer as participant observation, indicating that we as the researchers observed the activities without taking part in these, but all concerned parties were informed about the researchers' role and purpose. Hence, this approach lacked emotional involvement from us as we did not share the real experience with the informants, however, enabled us to be focused on our purpose and minimize the risk of us being caught by our emotions (Saunders et al., 2016).

However, limitations with the method exist. When conducting qualitative interviews, the study’s result is dependent on the reliance on respondents’ accuracy. Their emotional strains, the ability to understand the studied phenomenon, as well as, the capability of expressing their thoughts when being asked to respond right away, impact the result (Easterby-Smith et al., 2018). To reduce these limitations, we ensured to have enough time planned to not create a stressful environment, but instead encourage time for reflection, questions, and explanations.

3.4.2 Sampling Strategy

This study undertakes a heterogeneous purposive sampling strategy, which is a form of non-probability sampling design since there is not an equal likelihood for the entire population to participate in the study. Purposive sampling methods are often applied in qualitative research to identify information-rich cases, and participants are therefore selected based on their ability to fulfill the research objectives and maximize our understanding in the chosen topic. Accordingly, participants assumed to not contribute to fulfill the research's purpose become rejected (Patton, 2002; Easterby-Smith et al., 2018; Saunders et al., 2016). Non-probability sampling has drawbacks related to its ability to provide representative results of the entire population, however, following the qualitative design of this study, that is neither the aim. Rather, this form of sampling is found to be useful in cases where the population is too large for randomization to be a possible option (Etikan et al., 2016; Saunders et al., 2016). Following the heterogeneous purposive sampling strategy, the criteria applied in this study were to include participants with different characteristics and qualities to reach the highest degree of heterogeneity. Including participants different from each other provided us the ability to view the study's purpose from different angles which provides a greater understanding of the topic (Etikan et al., 2016). In addition, heterogeneity becomes a strength despite having a smaller sample with completely different cases, which otherwise can be questioned. The variation between participants provides valuable results in the form of shared patterns, key themes, and uniqueness of cases (Patton, 2002; Saunders et al., 2016).

As proposed by Patton (2002), it is advantageous to identify the diverse sample selection criteria prior to the selection of participants. Hence, as explained above, we developed a set of criteria to guide the sample selection process. With our aim being to explore the attitudes towards ARM in the context of HIPs, the criterion was designed to target individuals assumed to make high-involvement decisions on a regular basis and thus, contribute with value to our study. Therefore, the first criteria were set to people between 25 to 65 years old with their own accommodation, as this implies we could assume the individual most likely is part of the household's decisions. Another criteria were to include participants of different demographics such as age (within the given age span), gender, and profession as this can be assumed to result in participants possessing different qualities and preferences which is in line with the heterogeneous purposive sampling strategy (Etikan et al., 2016; Saunders et al., 2016). Hence, the goal was to include

participants that can relate to HIP purchases, due to their age and life situation. The participants also needed to own a smartphone since this was to be used in the interviews.

3.5 Contextual Interview Design

The data collection process started with us together discussing what questions had to be answered to gain the data necessary to answer the research questions. Thereupon, the interview structure was set, including an interview guide acting as the basis of the interviews. This guide can be found in Appendix C. As the interview's structure was determined, it was estimated that the duration of the contextual interview would be 45-60 minutes per participant (DiCicco-Bloom & Crabtree, 2006). The estimated duration could be confirmed through a conducted pilot interview. The pilot interview also helped us get familiar with the interview structure, questions and allowed us to analyze if anything related to the structure or formulations could be improved (Saunders et al., 2016). It resulted in us making several minor adjustments relating to questions that appeared unclear to the participant or were of a more closed nature than aspired. Hence, these questions were revised before the data collection started.

Thereafter, we approached the potential participants. All participants were contacted either by a call or text. We made sure to explain the study's purpose and that we were interested in collecting information about consumers' perceptions of an emerging marketing technology in relation to high involvement products. We also clarified that they were going to be asked to download an app on their personal smartphones during the interview. Each participant that accepted to participate was sent a consent form as found in Appendix D. The consent informed about the participant's rights, including being anonymous and the ability to withdraw their participation within 14 days after the interview was conducted. We made sure all interviewees read and signed the form before the interview. We also asked if they had any questions or concerns before the interview started.

Initially, 17 individuals were asked to participate in the study with 15 accepting. Two declined due to time limitations. After the first 15 interviews we felt that we started to reach our saturation point. However, to make sure we had all the data necessary we conducted five more interviews. After these, it was experienced that data did not add further value to our study (Collis & Hussey, 2014). Hence, in total, we conducted 20 face-to-face interviews with

a total of just above 18 hours of data. An overview of the contextual interviews is shown in Table 3. All interviews were held in Swedish to ensure minimized obstacles for the respondents to express themselves. The interviews were also recorded with the participants' approval, which was beneficial for us as we then could focus on the interview without worrying about transcribing directly, which helped foster a friendly and convenient atmosphere. Further, it enabled us to return to the primary source of data for the analysis (Saunders et al., 2016). The interviews were transcribed manually post-interview and after the initial transcribing we proof-read the transcripts. As the transcribing process of the interviews was completed, the audio recordings were deleted to minimize risks related to privacy of the participants.

Table 3

Overview of Participants

Participant Nr	Gender	Age (years)	Profession	Duration (Min)
P1	Female	34	Store Manager	61
P2	Female	58	Supply Chain Manager	49
P3	Female	34	Teacher	45
P4	Female	30	Bank Employee	41
P5	Female	49	Dietician	57
P6	Female	65	Florist	55
P7	Female	47	Skin-Care Consultant	55
P8	Female	26	Human Resources Assistant	49
P9	Female	26	Accountant	51
P10	Female	25	Administrator	40
P11	Female	51	Nurse	56
P12	Male	65	Plumber	70
P13	Male	25	Economist	46
P14	Male	25	Engineer in Data Technology	73
P15	Male	30	Construction Engineer	65
P16	Male	32	Personal Assistant	42
P17	Male	28	Software Development Engineer	74
P18	Male	60	Construction Manager	41
P19	Male	48	Marketing Manager	75
P20	Male	30	Engineer	48

3.5.1 Selection of ARM-Apps

Four ARM applications were included in this study with the purpose of observing real-time interaction with the technology. The selection of ARM apps was based on several criteria. First, the application had to offer HIPs, as this study aims to explore the perception of ARM in this context. Second, we aspired to include a range of different examples of HIPs, as the definition of HIP undertaken in this study states that HIPs refer to “products with characteristics perceived as personal and emotionally important for the consumer so that the cost of making a poor decision becomes high”. Hence, it naturally implies that the actual product might differ depending on the individual. By including four different products, we increased the likeliness that at least one of them appealed to the participants as a HIP. Following, the applications differed in how they were used. Chimi enables the consumers to try glasses on their faces while IKEA and TermaTech allow participants to place the product in their homes, while the BMW application mainly focuses on exploring the functions of the car. Lastly, our criteria were that the application was free to download and easily accessible on smartphones. An overview of the ARM applications included in this study is presented in Table 4.

Table 4

AR Applications exposed to observation informants

AR Application	Product Type	Brief Description
TermaTech AR	Fireplace	AR camera is used to place a fireplace in a room in relevance to the existing walls and other interior
BMW AR Bangladesh	Car	AR camera is used to see the car and its features in the consumer's own surroundings
IKEA Place	Interior	AR camera is used to place furniture and/or interior in the specific room where the product is intended
Chimi Eyewear Virtual Try-On	Sunglasses	AR camera is used to be able to see how different models for sunglasses look on the consumer

3.5.2 Interview Procedure

We organized the interview into four segments based on the focus. This type of interview design is especially suitable for exploratory research as it helps to provide a specific structure (Easterby-Smith et al., 2018). Organizing the topic guide into different parts allowed us to cover our main areas of interest on one hand, and concurrently supplemented by situational issues, to maintain the necessary openness and flexibility to discover emerging topics (Easterby-Smith et al., 2018). The interviews started with a brief introduction with the aim to create a comfortable environment for both parties. We made sure no uncertainties existed and confirmed that the consent was read, understood, and signed before we moved on with the first segment.

Part 1 - High Involvement Products

In the first part, we started by explaining the type of purchases and products that were of interest in this study, namely HIPs. Thereby, the respondents were allowed to freely discuss what type of product that could be for him or her. This, to put HIP in a real context before starting to answer the questions but also to assure that we and the participant had a mutual understanding of the concept. We explained the concept of *HIP* as: *Products that have certain characteristics perceived as personal and emotionally important for the consumer so that the cost of making a poor decision becomes high.*

Part 2 - Familiarity with ARM

The second block was about the respondent's familiarity and perception of ARM. To create a bridge between the two parts, the goal was to move from discussing the factors that were important for the participant when purchasing HIPs, to introducing the ARM technology and how it can be used for HIPs. First, the participant was asked if they were familiar with ARM, to gain a perception of the current knowledge. Thereafter, we either confirmed or denied that persons' statement by providing him/her with our definition. *ARM* was explained as: *A tool reinforcing a person's perception of his or her reality by overlaying digital elements (such as graphics, video, and audio) in that person's physical world. It could for example be using a mobile camera to try on sunglasses from home to see how they look on you, or test if a piece of specific furniture would fit your living room by seeing that product in your home.*

Part 3 - Observation

The third part included the observation of the participant interacting with four different ARM platforms, presented in Table 4. We presented each of the platforms and the participants were allowed to decide which one they wanted to download themselves. A major reason for the participant downloading the app on his/her own device was for us to observe how he/she acted in the full process: from first receiving information about the ARM platform, to actually using it. This is to see if any prominent obstacles or other valuable insights in form of comments or actions appeared during the process. For instance, potential hinders could be related to if the participant hesitated to accept all of the requirements necessary for the app to work, such as camera approval or experienced technical barriers of being able to monitor and use the technology as intended. The other three platforms were offered to be tested on our phones, to facilitate the interview process for the participant. As the observation started, the participants integrated with the platforms, and we took notes on the comments that appeared spontaneously, as well as asked follow-up questions on comments particularly of interest related to the study's purpose. As both of us were present, one of us took the more active role in asking follow-up questions and asking for clarifications of certain expressions, while the other had more of a passive approach and focused on taking notes on what was observed. This, to assure that neither important questions nor observations of value were missed.

Part 4 - Post-Experience Perception of ARM

After the participant had interacted with all four platforms, post-interaction questions were asked about the experience and the interviewee's perception of the relevance of ARM in HIP purchases. The questions were related to the questions in the second part, with the idea to see if any thoughts or views had changed or if new ideas emerged after trying the technology. This, to gain a more thorough understanding of how participants perceive ARM in the context of HIPs in a hands-on situation.

3.6 Data Analysis

Data were analyzed through a thematic analysis, being when one identifies, analyzes, and demonstrates various themes within data important for the study's purpose. Thereafter, one uses these themes to address the research questions (Braun and Clarke, 2006). It is a flexible and straightforward technique to derive conclusions, moreover, a suitable approach to qualitative research, which further supports this choice (Collis & Hussey, 2014).

The thematic analysis consists of six steps. The first step is to become familiar with the data. We did this by transcribing the contextual interviews immediately after they were held, which gave a good overview of the data. Thereafter, the transcripts were read thoroughly by both authors. We noted down initial codes across the entire data set by writing comments in the margins of the transcripts related to the research questions to remain focused on the study's purpose. In step three, we identified the initial themes by clustering codes that were similar or showed connections into categories and subcategories. In the fourth step, we reviewed the themes once again. Here, themes that were initially separated into two or three eventually became bulked into one. To illustrate this, we for example identified ARM is perceived to help the consumer receive either "positive confirmation" or "negative confirmation" to a purchase decision. These codes became the subcategory "confirming the decision" before it together with the subcategory "assisting the decision" became the theme "complementing tool". This reveals the fifth step of defining and naming themes. The four final themes were derived from all interviews, but to varying degrees and from different perspectives. Figure 2 visually presents the steps taken in the thematic analysis.

Figure 2

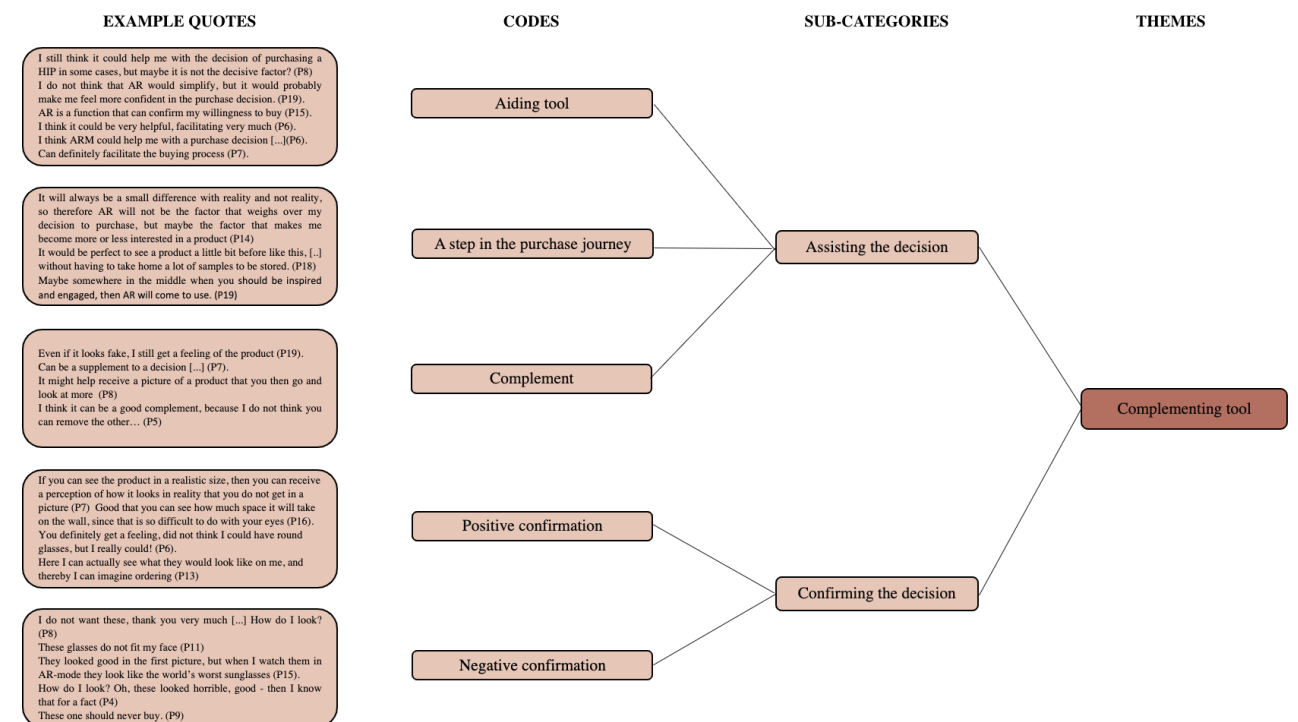
Steps of Thematic Analysis (Braun & Clarke, 2006)



To illustrate how the themes emerged, an example is provided in Figure 3 below. For further clarification of the coding procedure, see Appendix E.

Figure 3

Example of Coding Process



3.6.1 Analysis of Findings

After presenting the empirical findings in Chapter 4, the extracted themes were analyzed and explained to answer the research questions. The analysis was conducted by reviewing the study's results and the literature presented in the Frame of Reference. Similarities and differences between our findings and extant literature were identified and compared, acting as the basis for the discussion. Some findings were confirmed by previous researchers, whereas also new findings were brought to light adding to current knowledge. Hence, by contrasting and reversing the data from different perspectives, the analysis reached a final conclusion fulfilling the study's purpose to help bridge the identified gap in literature on how ARM is perceived by consumers in the novel context of HIPs.

3.7 Trustworthiness of Study

3.7.1 Credibility

In this thesis, we followed several strategies to strengthen the credibility, which in research refers to the extent a study is accounted to provide credible and accurate results, with particular reference to the level of agreement between the study's authors and the participants (Guba, 1981; Anney, 2014; Lincoln & Guba, 1985). First, we combined observation and semi-structured interviews which allowed us to explore ARM from the consumer's perspective in different ways, from which we then could draw more extensive conclusions. Further, investigator triangulation was applied, referring to when more than one researcher investigates the same research problem. Triangulation is an effective factor to increase research credibility, as it enables multiple perspectives on the problem and a broader understanding. It also reduces biases (Guba, 1981; Anney, 2014; Collis & Hussey 2014). However, we cannot state that the research is completely unbiased since the study is done by only two people, moreover, since the study's result is based on what the participants argue are their opinions, which is something we cannot validate. In an attempt to overcome these challenges, we included participants with diverse demographics and personal qualities to receive multiple perspectives on the topic (Easterby-Smith et al., 2018). By using semi-structured interviews we also had the potential to achieve higher levels of credibility as we could elaborate upon the interviewees' responses with clarification questions, probing, and laddering up and down. This enabled us to explore the answers from various angles and strengthen the honesty of the data (Saunders et al., 2016; Lincoln & Guba, 1985). Regarding reducing the bias of us as the authors, we made sure both of us participated in all the study's stages from research planning to data collection and analysis. This made it harder to incorporate our own views. Instead, we helped each other to focus on the study's purpose, look at the data from an objective perspective, and not lead the study in any direction. Also, peer debriefing was applied to test our emerging insights. This was completed by involving peers and an assigned tutor which by continuous meetings throughout the process enabled reflection upon findings (Guba, 1981).

3.7.2 Transferability

In research, transferability indicates to what degree the findings of the research can be applied to other settings (Guba, 1981; Saunders et al., 2016; Easterby-Smith et al., 2018). Following a qualitative approach, the aspiration of this study was not necessary to achieve complete generalizable results. Rather, the aim was to develop theories that might be useful and applicable in other similar contexts which are determined by transferability (Saunders et al., 2016; Guba, 1981). To increase the level of transferability, we provide detailed and transparent descriptions of how each step of the research process has been conducted. This includes the research questions, methodology, data collection, findings, and overall context of the study. As a result, it facilitates research replication and eases the likeliness of other researchers comparing our study with other potential settings (Anney, 2014; Saunders et al., 2016). As we applied purposive sampling, it allowed us to emphasize the participants' potential for contribution rather than representativeness to enable statistical analysis. This implies the participants of this study could provide rich data increasing the transferability (Guba, 1981)

3.7.3 Dependability

Dependability is about reliability and emphasizes the importance of documenting and presenting all changes and decisions made during a research process so other researchers can understand and evaluate them. Hence, it is about creating assurance that the study's data is trustworthy and reliable, by explaining how the data was collected. However, threats to dependability exist in qualitative studies (Saunders et al., 2016). In the interviews, data was collected by us in particular settings and at particular times. For the participant observations, data was collected by studying the informants and their actions in their natural settings. This means both methods are based on relevance to the situation and are therefore hard to perfectly replicate. To minimize this frailty, each step of the research process has been thoroughly explained in the paper, both concerning the choices made and the data collection process, to facilitate the understanding and replicability for other researchers (Easterby-Smith et al., 2018). Further, evidence from previous literature was gathered to support our claims and the uniqueness of the report was perceived as an advantage and contribution instead of as a disadvantage (Saunders et al., 2016).

3.7.4 Confirmability

Confirmability is about neutrality and objectivity, which are important factors to collect credible data (Lincoln & Guba, 1985). In qualitative research, it is about preventing the research from being influenced by the researchers' interpretations and viewpoints, and instead making sure all findings are derived from data (Easterby-Smith et al., 2018). To avoid personal bias and maintain neutrality, both of us as previously explained participated in the contextual interviews and used our pre-developed interview-guide to not steer the conversation in any specific direction. The interview guide was designed by combining standardized questions with situational open-ended questions to increase confirmability by enabling compatibility. We also made sure both of us asked follow-up- and probing questions when further explanations were needed and to avoid any misunderstandings. Further, the data analysis process was conducted together. We started reading through the recording scripts ourselves and then coded them together to minimize any personal bias. The interview transcripts were cross-checked and we took time to reflect upon the results. Lastly, the discussion is based on previous literature which also increases the confirmability.

3.8 Research Ethics

As research has the potential to impact individuals and society, it is of great importance that ethical considerations are considered in each step of the research process. Research ethics relate both to the execution of research and the presentation of the findings. Hence, concerns might arise during the planning stages, strategies for data access, collection and analysis of data, and how findings are reported (Saunders et al., 2016; Easterby-Smith et al., 2018). In this study, it has therefore been our aim and responsibility to establish research ethics by following Bell and Bryman's (2007) eleven key ethical principles as listed below.

1. Ensuring no harm to participants, the researchers, or others.

We tried to assure participants' physical and psychological well-being in this study by planning and developing an interview guide so that it did not risk harming the participants by any means. Further, all participation was voluntary and we aimed to provide a research setting where all involved felt comfortable. This was especially important in the observation phase since it was observed that some of the people had a hard time understanding the ARM platforms. In response, they started laughing and excusing themselves with a bit of

embarrassment. To prevent this, we at the beginning of step three explained that there is no right and wrong. Some apps are easier than others and we want to see how they interact with them. If we went back and repeated this research we would have acted similarly, as the fact that the participants were able to integrate with the technology without us telling them how they worked helped us better understand how they perceived the ARM platforms, which was of value for the study.

2. Respecting the dignity of research participants

We showed our greatest respect to each other and all participants by viewing each participant as equally important for this study. Additionally, all answers were carefully considered and evaluated as the participants were not differentiated based on their prior experience of ARM or their demographics. After each interview, we made sure to thank them for their contribution.

3. Ensuring the informed consent of research participants

Before each interview, the participants were provided and asked to sign a consent form listing their rights as a participant in our study. Participants were also free to ask questions related to the research process in addition to the information provided in the consent.

4. Protecting the privacy of research participants

We did not collect any personal data that were sensitive. We carefully evaluated what data we needed from the participants and did not ask for information related to the participants if there was no significant value in this information related to our study. Participants also had the right to not answer a question if they felt uncomfortable doing so. The last step is however hard to make sure the participant felt the courage to do. When sitting in an interview with two people it can be hard to not answer even if one does not want to. However, we made sure to explain that it was okay and we also did not include any questions sensitive in nature.

5. Ensuring the confidentiality of research data

We did not include any information in this study that the participants expressed a wish to be confidential, nor data that had not been approved before the interview.

6. Ensuring and protecting the anonymity of individuals involved in the research

We only presented the participants' age, gender, and profession in the paper, hence, did not include any information revealing their identities.

7. Avoiding deception

We were open and transparent about the nature of this study and did not try to act deceiving in terms of misleading words or behavior. In this study, a transparent description of each step of the research process is included. No attempts of deception or hiding information were made at any point.

8. Declaring any professional or personal affiliation

We did not receive any fundings or gifts to execute this study which minimized the risk of conflicting interests.

9. Ensuring honest and transparent communication to all interested parties

Honesty and transparency were ensured during the entire research process by providing open and transparent communication to the participants about the purpose of the study both before, during, and after the sessions. The same goes for the external parties interested in the study's result. A detailed description of the entire process and analysis of the study is provided to increase the level of honesty and truthfulness to prevent any information from being "hidden", since the goal is to be as transparent as possible for other researchers to understand the result and build upon it.

10. Aiming for reciprocity

Our aim is that this study should have equal benefits for us as the authors and the participants. Increased awareness of ARM as a marketing technique for HIPs might benefit both organizations and consumers as the findings of this study can enhance the development of marketing communications.

11. Avoiding misrepresentation: avoid misleading, misunderstanding, misrepresenting, or false reporting of research findings.

To avoid misleading or misinterpreted information, data were reviewed both independently by the authors as well as together. However, since the interviews were conducted in

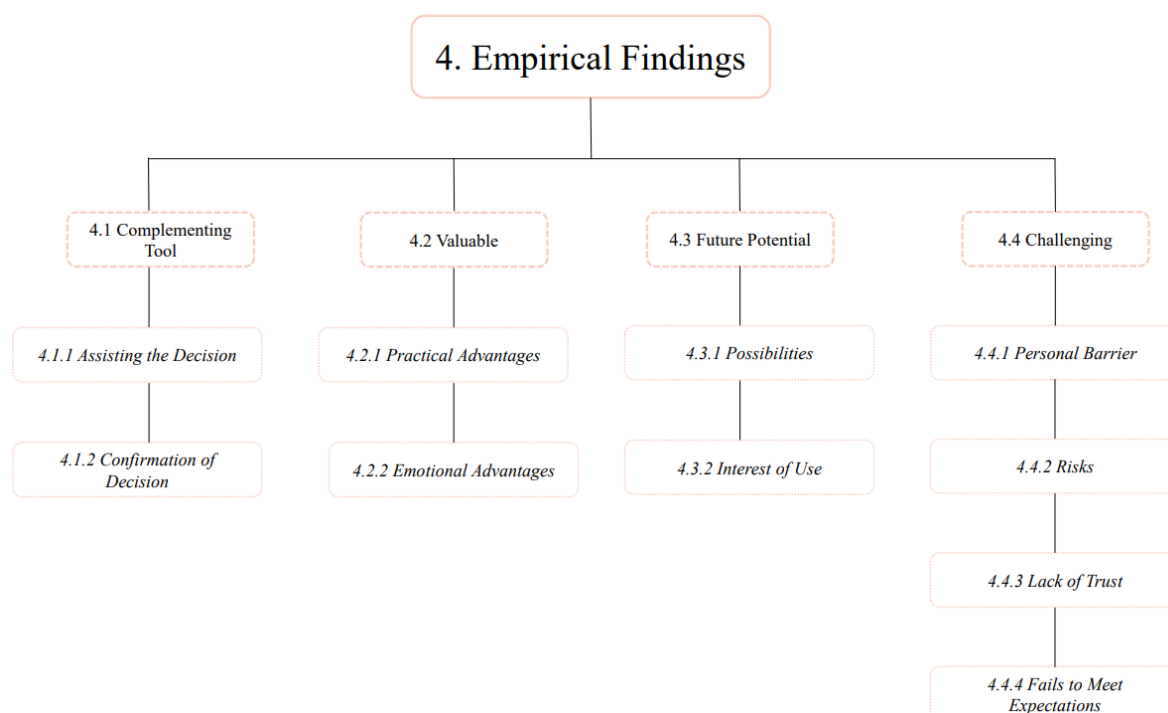
Swedish, there is a risk that some quotes in this study are not identical to the original saying as they are translated. As aforementioned, this is carefully considered by the authors and quotations have been reviewed by both authors to avoid any false reporting. Further, this study involved peer discussions and the support and guidance of an external supervisor which reduced the risk of incorrect and faulty presentation of data.

4. Empirical Findings

In the following chapter, the findings from the conducted contextual interviews are outlined. The structure of the findings is guided by the themes and subcategories emerged during the data analysis process as presented in Figure 4. However, the order in which the findings are presented does not reflect the importance or prevalence in the data. With the purpose to clarify data, the section includes direct quotes from the participants. The findings are further analyzed in the next chapter.

Figure 4

Structure of Empirical Findings



4.1 Complementing Tool

4.1.1 Assisting the Decision

It is clear that the participants perceived ARM to be capable of acting as an aiding tool to both ease the isolated decision but also the purchase process in general. Hence, the results show that ARM has the potential to assist the purchase decision of HIPs for consumers.

“I think ARM could help me with a purchase decision [...].” (P6)
“It can definitely facilitate the purchasing process. A good ARM-tool equals time management!” (P7)

However, rather than viewing ARM as one specific factor to determine the purchase, the participants expressed that ARM would be a helpful tool, part of their entire purchase process. Hence, ARM tends to be perceived as an additional source of information and/or complement to the consumers’ current tactics and procedures when purchasing HIPs.

“I still think it could help me with the decision of purchasing a HIP in some cases, but maybe it is not the decisive factor?” (P8)
“I think it can be a good complement because I do not think you can remove the other” (P5)
“There will always be a small difference between reality and not reality, so therefore, AR will not be the factor that weighs over my decision to purchase, but maybe the factor that makes me become more or less interested in a product.” (P14)
“It can be a supplement to a decision.” (P7)

4.1.2 Confirming the Decision

The findings also suggest that there is a strong pattern of ARM helping to confirm purchase decisions, both positively and negatively. First, ARM can positively influence the decision by helping to determine whether the product is worth buying. If the product appears appealing, it can strengthen the intention to fulfill the purchase. The participants stated that ARM’s ability to provide a greater and more realistic idea of the product helps determine whether the product will be a good option or not. If it looks good while using ARM, it positively impacts the purchase.

“AR is a function that can confirm my willingness to buy.” (P5)
“Here I can actually see what the product would look like on me, and thereby I can imagine myself ordering.” (P13)
“You definitely get a feeling. Did not think I could have round glasses, but I can!” (P6)
“If I know that I want this shelf, and I can confirm that it will look good in my home, then that would be the nail in the coffin making me buy it.” (P15)

Concurrently, ARM can help consumers sift out alternatives by rather than helping consumers decide which product to buy, it becomes a confirmation of what not to buy and that no more time should be spent on those options. For instance, participants can see whether products fit in their intended environment in terms of size and shape and if not, they can exclude the product from the list of alternatives.

“Oh these looked horrible... Good, then I know that for a fact.” (P4)
“I do not want these, thank you very much [...] How do I look?” (P8)
“These glasses do not fit my face.” (P11)
“They looked good in the first picture, but when I watch them in AR-mode they look like the world’s worst sunglasses.” (P15)
“Oh, these ones I should never buy.” (P9)

Accordingly, the findings indicate that the participants perceive ARM as a complementing tool assisting and aiding the purchase decision by adding a step in the purchase journey that could both bring positive and negative confirmation to the purchase intuitions.

4.2 Valuable

4.2.1 Practical Advantages

It is shown that ARM provides value for consumers in the context of HIP. Despite the value being expressed differently depending on the situation and individual, there is a strong tendency that participants find ARM to provide practical benefits related to the purchase. First, its prominent value is perceived in terms of being able to visualize the product in a more realistic setting as well as get an idea how it might fit in the intended context.

"It is useful to be able to test things at home and on oneself like the glasses. It provides a more realistic feeling." (P10)

"You get an idea and a good feeling. By walking around and seeing, comparing the sizes by trying it on your body or in a room. It can definitely facilitate the purchase process." (P7)

"Instead of a picture, you get a feeling. As I said, I also think it is a good thing to use to see the sizes of products, because that is often very difficult." (P8)

"Furnishing your room can be cool, especially if you're like me: poor at visualizing what it can look like" (P14)

"When I am about to buy solar cells, I can imagine using it, to get a sense of what it will look like. It is hard to get an idea otherwise, if you do not get a good picture." (P5)

Another value is that ARM enables the consumer to try the product from their homes, which allows them to avoid stressful situations sometimes emerging in-store.

"I have found it a bit stressful when you are in the store and everyone in the store is watching you, even the salesman and family members. There is pressure. It would have been nice to be able to sit at home in peace and quiet and get a first feeling." (P14)

"I think it probably would be nice to try the glasses from home... try different ones and see which ones fit you." (P11)

"I do not have time to go to the store during the day, because then I am at work. And after work I have to take care of the kids. So it is not until the evening that I actually have time to sit with my husband and discuss our new kitchen or couch, and look up the different alternatives. But then the stores are closed. Therefore, something like this could help me a lot." (P1)

The ability to visualize the product opens up for several other valuable aspects as consumers perceive they can save time and transportation by simply not having to visit the store and/or order the product to their home to get a realistic view of the product. The participants tended to express that ARM has great value for HIPs they perceive as impractical to order and return, for instance very large or heavy objects.

"It would be perfect to see it like this and be able to build a room without having to take home a lot of samples." (P18)
"I would use this if I did not have the opportunity to try something before I bought it. For example, if you buy something very expensive or so big that you have to rent a trailer to pick it up. Then, I would probably test every aiding tool I could before I bought it." (P9)
"It would be good to receive a picture of something I cannot try. For example, large furniture or difficult things to order. [...] it would be nice to, for example, not have to order a sofa on chance. In such situations I see the need the most." (P8)
"I think most people would like to try it to save time" (P11).
"If you want to save time and not go to IKEA for instance, then it might of course be useful!" (P6)

Further, several participants stated that ARM is valuable since it helps minimize the perceived risk of a HIP purchase. If consumers are unsure about their decision, ARM can minimize that feeling and bring confidence to the purchase.

"I cannot bear a poor decision. One has to be safe, and then you will find a tool like this on the way." (P1)
"It might be useful to see how the table fits and looks in terms of its color and so on. Those are things that one is usually unsure of." (P4)
"It could be another parameter if I am unsure of something, kind of the tipping point that pushes me to make the purchase." (P19)
"Since you can now order things online, it would be perfect if you can sit at home and try it out online and then be confident it will be a good fit." (P6)

Hence, the findings indicate ARM provides value to the consumer during the purchase process. ARM tends to help consumers make a more informed decision that involves a lower degree of risk as it allows consumers to avoid unnecessary, uncomfortable or time-consuming actions.

4.2.2 Emotional Advantages

The result indicates ARM can provide value that is not entirely linked to the specific purchase as well. It was clear participants perceived ARM as an exciting and appealing tool that despite facilitating the purchase had entertaining benefits. Our findings reveal consumers can find ARM amusing as it allows them to have a playful approach while also viewing the product.

"Cool! It was fun to play a little or how you should express it. " (P10)
"It was so fun to drive the BMW in my room, it was like a radio-controlled car. [...] I might show the BMW app to my friends, because it ended in a fun way "(P14)
"I will send this to my dad, because he will think it's funny to go to the garage driveway and try it out." (P15)
"I think this was fun, because it is a bit new. Something I have not done before. There are new opportunities to, like in the case of the sofa, facilitate a purchase "(P11).
"This was kind of fun! Once you understand all the procedures, I think I would find it very amusing! I really do believe so"(P6)
"This is fun! [...] Smart!! [...] Great!" (P15)

Consumers tended to view ARM as less intrusive compared to other types of marketing. Participants even expressed ARM is not really perceived as a sales tactic or marketing due to its entertaining value. As the consumer must take action to use the technology, it is perceived as more playful and appealing to the consumer, while also increasing the engagement.

"I do not think this is marketing really? It feels more like a game and it gives more benefit to me as a person because I do it myself and it is not an ad you just get exposed to." (P3)
"In general, I think there will be more lively than just a brochure, and if there is more life in it, it will be more realistic and then easier to relate to the purchase." (P7)
"The customer becomes much more involved with AR because you have to make active choices to use it." (P14)

To sum, the participants experienced both informative values as earlier stated, as well as, entertaining values in terms of the platforms being amusing and appealing to use, making it more engaging and less intrusive than other forms of marketing.

4.3 Future Potential

4.3.1 Possibilities

It is a common perception among the participants that ARM has great potential and probably will grow a lot in the upcoming years. It is even stated it might become a standard practice which all companies will need to have.

“In five years I think this will be standard.” (P15)
“Since eCommerce is growing, this might be a “must” in the future.” (P5)
“I think it will be improved and more common in the future.” (P4)
“When AR is everywhere it will be an obvious factor. If you are the first firm it might give you a competitive advantage, but later it will just be a standard practice.” (P19)

Here, some participants express that it might evolve with time. Because the more experience both the consumers and the companies receive with the technology, the easier it will be to integrate with it.

“In ten years when the old people are dead and we are in the middle age, then, I do not think it will be too technical to use for the “ordinary” human being. People will be competent enough to use it in the future.” (P14)
“Today, we are not so used to it. It is not integrated in our purchasing processes, but that is something that potentially will change.” (P19)

It is also found that consumers perceive ARM to have much potential because it can be used for so many different product categories.

“I think I will use these technologies in the future to try out different products.” (P6)
“In fact, there are no limits. You can use ARM for anything.” (P12)
“I absolutely see the areas of usage and that it can facilitate different purchases. (P5)

One important factor identified is that the participants perceive ARM to be more suitable for some HIPs than others. If a product’s main area of usage is “functionality” ARM will not be as useful, or maybe not useful at all, in comparison to a product whose main task is to have a nice design.

“I think ARM is more suitable for some products than others. For a ground source heat pump maybe it is not so useful, because its main focus is not the design but the technology and its effect [...] But with solar panels or color to your wall, where the design is important, then it is great.” (P15)
“I think it is more suitable for products where the look is in focus, as with paintings, than with a guitar whose main focus is the sound.” (P14)

Yet, the overall perception is that ARM has great potential and probably will be used a lot more in the future.

“If the technology would be as good as I see it in my head, then it would be really good. So in the future I believe in it.” (P16)
“I think the AR-world will grow! It is so good that both the consumer and company should invest in it.” (P3)
“I do see potential with ARM, for example the ability to see proportions and colors is really good.” (P17)

It is even stated that the existence of ARM can be a determining factor when deciding which company to buy from.

“I am super positive towards ARM. [...] I think I would choose the company offering that opportunity over another company not offering it.” (P15)

Hence, the participants believe ARM will grow a lot and become standard practice in the future, at least for some HIPs. However, emphasize that the technology must be improved to do so.

4.3.2 Interest of Use

From the interviews, it was evident that the participants are curious about the technology, want to know more about it and are open to seek for it in future HIP purchases. Especially if the technology is improved.

"You get curious. I will actually ask in stores if they have something similar." (P3)
"I have an interest in using it, but I do not think it is good enough to be used today. If it gets better, I can imagine trying it again, especially with furniture." (P13)
"It would have been exciting to check it out. [...] If I find an app when I search for "build your house at home" and I find it, then I could imagine myself testing it." (P12)

Hence, it is clear an interest in ARM exists. Several potential areas of usage are raised and a wish of wanting to try it in the future is expressed. Further, it is suggested ARM is extra interesting for people not living close to stores.

"Actually, you can use ARM for everything where you want, if you want to avoid going to the store or do not have the opportunity to do so." (P16)
"I think it could be very helpful, and make life much easier. There are for instance people who cannot go anywhere by themselves." (P6)

It is also stated that "everyone should want to try it if it is easily accessible" since it provides the opportunity to receive a perception about proportions and fitting in the selection process, which otherwise can be challenging. Hence, the participants express they are open to try it, and actually would have wanted to use it in previous HIP purchases as well.

"If you see a pair of nice glasses and it says "view them on yourself here", I think everyone would want to do that." (P15)
"I can imagine trying something like this in the future. For example, to see if this sofa fits here, or is it too big." (P5)
"The more difficult the purchase is, the more I can imagine myself testing it." (P9)
"It would have been perfect to be able to be at home in the house and see the room in front of you. Both in terms of interior, but also other choices such as equipment and decor. Actually, all items were you wish to see them in their "real" environment. " (P3)
"I would have loved to have it when we remodeled our kitchen last winter. To kind of see how everything could turn out and compare if we should have chosen black or cream colored appliances for instance." (P4)

4.4 Challenging

4.4.1 Personal Barriers

Despite the many benefits perceived with ARM, the findings also show that the participants recognize ARM as challenging and a bit inconvenient. First, because it takes a lot of time. If there are too many steps in the process, the interest is lost. Participant 11 even told us she had the opportunity to try ARM once, however, chose to abstain partly because it felt time-consuming. The participants also perceived it inconvenient to download the apps. Here, Chimi received a lot of praise because their ARM was integrated into their website.

“For me that is not that technical, this was time-consuming...” (P7)
“I would have needed to put a lot of time into it to scan everything etc and make it work, and no one can bear that.” (P13)
“Also, downloading the apps I think most people find complicated. I already have so many apps so I think I would skip it actually.” (P2)
“Downloading the app I think is a big challenge. Also, to get people to understand and make it a habit to use.” (P10)
“Why should I download an app if they could have integrated it on the website? (...) Most people do not enjoy downloading apps on their phones.” (P13)

Finally, the participants perceived the platforms a bit inconvenient in terms of practical aspects, referring to the fact that one needs to remove one's existing furniture in the intended room to truly be able to visualize the virtual furniture in its intended place.

“I will not remove the table I already have to try another one with AR, so I will not be able to use the app in a realistic way.” (P14)
“If you are untechnical and also do not make the preparations needed to use the app optimally, then it instead becomes more like a joke.” (P1)
“One does not have the strength to refurnish to test an app, so it becomes a bit inflexible in that way.” (P10).

Another personal barrier identified is the technical aspects. A concern raised by several participants was that if it is too complicated and technical, it will not be worth it. Moreover, be impossible to use.

"I think it is too complicated, and I am not that bad with technology, but it was still very hard for me. Therefore, I am sure there are other people that will have it at least as hard as me." (P2)
"If it is too complicated and technical advanced, and it takes too much time, then it is not worth it." (P11)
"It might be a challenge to get unsecure and nontechnical people to try it." (P3)
"[...] companies must make it easily accessible and not too complicated." (P6)
"It was too cumbersome to download the app. Also, a helping guide would have facilitated the process a lot." (P14)

Two other challenges repeatedly raised by the participants were the aspects of awareness and accessibility. If one does not know that the ARM technology exists, it is not easy to have a perception of it, nor try it. Of the participants in this study, 50% were familiar with AR and ARM (P19, P17, P10, P16, P20, P13, P4, P2, P15, P14), whereas 50% had not heard of it before (P1, P6, P18, P12, P9, P7, P2, P5, P3, P11, P8). It was also highlighted that it needs to be easily accessible, otherwise, one might not want to use it.

"One must know that it exists for starters. This, companies must inform about." (P5)
"It is a challenge to find it and know about it." (P12)
"I think I would rather go to the store and feel and squeeze the product in reality if I live near." (P5)
"I would not actively search for it, but if it was right in front of me I would definitely use it." (P19)
"The challenge is to make the customer see the added value, and also easily find it." (P15)
"As long as they do not integrate ARM in the website like a service, then one does not find it." (P1)

To sum, the participants raised several concerns regarding potential barriers towards using the ARM platforms. First, it was perceived time-consuming and inconvenient to use and download, as well as a bit too undisclosed and complicated to find. Further, a fear for not all people possessing the necessary technical skills to understand the ARM platforms were expressed.

4.4.2 Risk

Despite personal barriers, other risks with ARM were also identified. The results show that if the technology is not good enough, it can instead diminish the experience of both the product and company. During the interviews, loads of feelings were expressed with the participants

being both frustrated, confused, and disappointed. As participant 19 pinpointed, this is concerning since “companies invest millions in the purchase experience, but that investment can quickly become quite useless if they somewhere along the journey makes the consumer dissatisfied”.

“If the technology is not good enough to add value, I think it could have the opposite effect. Technologies that are quite B are the most frustrating thing.” (P20)
“It is almost better to remove the function than having it if the impression is too bad. Then I lose my interest.” (P15).
“Quite B honestly, positive aspects exist and I thought it was fun, but I think I saw too many flaws to not question why these apps have been launched.” (P20)
“I am a bit irritated with BMW, I mean they do sell a premium product, but this was not a premium experience. [...] It rather lower than increases the idea of BMW.” (P19)

The participants also stated that if the ARM platform is too poor, it might result in the consumer not wanting to purchase the product even if the product otherwise would have been bought.

“I was not able to make it work, so I just felt stupid when I went around in the room and did not exactly become excited about shopping.” (P2)
“Usually I would have just purchased it and tried it at home, but now I chose to not purchase it because it did not look good.” (P15)

Another common denominator, especially among the female participants, was that they started to reflect upon and criticize themselves when integrating with the ARM platforms. When not understanding the platform they became embarrassed, and when seeing themselves in the mirror they sometimes questioned their looks, which also could result in expressions like “ok these I will absolutely not buy now” even if they from the beginning thought the sunglasses for example looked quite good.

“The experience was that it was very difficult, and I felt stupid.” (P5)
“I think it might be too hard for me, I am not so technical.” (P11)
“Oh I do not know... I think I am the wrong person to use this!” (P7)
“Oh no... I look horrible. Very sad to see oneself like this, am I so old?” (P5)

4.4.3 Lack of Trust

Another common understanding among the participants was that it is hard to trust the ARM technology, both in terms of measurements, size, proportions and color. This was one of the most raised concerns in all interviews.

“I would not trust today's AR apps with colors and sizes etc.” (P8)
“Is the couch this big? Can that really be true?” (P2)
“Aheee, is this really the real size?” (P17)
“When it comes to colors, it could be black but also dark blue... it cannot be trusted.” (P12)

Hence, the participants see value of ARM if working correctly, but they are not sure it does. They also expressed it might be hard to trust digital tools in general.

“I think it can accelerate my decision, but I would still want to see the couch in reality. Because reality cannot deceive my eyes, but a picture can.” (P12)
“It feels a bit suspicious that all the glasses seem to fit me perfectly...” (P20)

Another perception of ARM is that it feels a bit insecure in terms of privacy. Several respondents expressed a concern about needing to approve access to their cameras. Participant 6 even denied access without even reflecting upon it, which resulted in her being unable to try out the ARM platform.

“It is in my spine to not give approval to the camera, I want to protect myself from everything, therefore I denied.” (P6)
“Does it need to access my camera?” (P7)
“They want so much access to so many things, my camera and now my album. It concerns me. I understand that it is about privacy rights, but for a skeptical guy like me it makes me worried about what type of data they actually collect from me.” (P19)

4.4.4 Fails to Meet Expectations

Following, it was identified that the participants perceived the technology to be a bit of a disappointment, not meeting their expectations. They for example thought the products looked fake in the ARM platform, which they questioned since the goal of ARM is to see the product in its intended context in a “truthful” sense.

“One wants the ARM to be better than pictures and videos, then, the products cannot look so animated.” (P20)

“They must have better control over where the products are placed to make it more realistic.” (P14)

“It still does not look like in reality, it looks fake.” (P5)

Another aspect raised was the fact that some key elements important for HIPs are not and cannot be included in the ARM platforms, which weaken the usefulness of ARM in some contexts.

“There are so many key elements that are missing. [...] for example the sound of my guitar or how comfortable a couch is. Those elements might be more important for HIPs than the design,” (P14)

“I want to feel the speed, space, acceleration, size and comfort. Also, some numbers should have been included with the dimensions, hard to see with the eye.” (P11).

“One wants to experience the size of a car and hear its sound, and that one must do live. (...) It is also nice when I can talk to someone during the process to receive answers to my questions” (P7)

“When I purchase HIPs, I think it is super important to talk to a salesperson that explains to me how the product works and what I need to consider when deciding what to buy. [...] In the ARM-platforms I receive no human interaction, which is something I want to feel comfortable with my purchase. Especially with expensive products” (P5)

An important aspect for consumers when purchasing HIPs is to compare between different products and brands to find which product suits them best. This was one feature that the participants thought was missing, which is important for them when doing HIP purchases. Hence, the ARM platforms are perceived as a bit undeveloped.

“I missed the ability to compare between several alternatives. It was very troublesome... to scan the whole room over and over again for example.” (P15)

“If the technique is good enough, I think one has great use of it. But today, it was too messy and hard. The platforms need to be improved.” (P13)

“Today I think they are too bad to give enough value.” (P16)

Another common perception was that the ARM platforms were quite difficult to use and understand. More helping guidelines and updates in the software are necessary for the consumer to understand how to interact with the platform in an easy way.

“It was hard to navigate.” (P13)

“It might just be me that does not get it, but it was very hard to understand and use.” (P11)

To sum, consumers perceived ARM to not meet their expectations, as the products looked too unrealistic. Further, some key elements important for HIPs, such as the sound of an instrument or speed of a car, could not be experienced. They also wanted clearer guidelines of how the technology worked, as well as missed the feature of being able to compare between different HIP models and attributes.

5. Analysis

This chapter presents the analysis of our findings that emerged from the data analysis, through the lens of the established Frame of Reference (Chapter 2). In this section, findings will be analyzed in accordance with this study's purpose and research questions. We point out and discuss consumers' perceptions of ARM in the context of HIP. Thereby, the analyzed findings build the foundation for the conclusion and discussion in the following chapter.

5.1 Complementing Tool

It can be seen consumers perceive ARM as a tool that can facilitate, help and complement their purchases of HIPs. According to our findings, consumers view ARM as an aiding tool to ease the evaluation process and decision-making but also the overall purchase process. However, rather than being one isolated tool for shopping or source of information, consumers tend to view ARM as a complement to other sources of information available as it enables viewing the product in new ways, yet, does not substitute the value one receives from a video or picture since one can gain more details about the product in a video and more inspiration about how the product can be used in a picture. This view has not been underlined in previous literature but it is touched upon in the work of Wedel et al., (2020) who suggest AR technology should be integrated into established marketing approaches with the purpose to make these more efficient, rather than replacing them. Our findings are in line with this as it is found that ARM is perceived by consumers as a complement in the process rather than a substitute for other marketing tactics. ARM becomes a complement by being an additional source of information that adds another dimension compared to for instance pictures and videos. Hence, our findings indicate consumers perceive ARM to have the potential to be integrated into marketing plans for HIPs with success but it might not necessarily be beneficial if it is at the cost of current marketing efforts as these might still be found valuable for consumers as well in terms of inspiration and detailed information.

Further, our findings show ARM is perceived as a source to confirm the participants' thoughts, as it is more convincing to consumers compared to solely using the Internet or viewing pictures for instance. Hence, it is shown ARM might be a determinant of the purchase. First, ARM can

positively confirm the decision, meaning consumers get confident enough that the product will meet the expectations as they can view the product in its intended context. As a result, it becomes the tipping point to proceed and fulfill the purchase. On the other hand, consumers also express ARM is helpful in terms of screening alternatives and being able to disregard alternatives in early stages not worth any further information search or evaluation. This we refer to as a negative confirmation, as it helps the consumer get confident about what *not* to buy. As a result, one can say consumers view ARM as more confidential compared to other sources of information and product presentations as also found by Hsu et al., (2021) and Daassi and Debbabi (2021). This can be explained by the characteristics ARM possesses. The ability to view the product in new formats and its intended context of use enriches the experience with the product, which increases the confidence of that the product is meeting the expectations (Daassi & Debbabi, 2021; Sung, 2021; Rauschnabel et al., 2022; Hsu et al., 2021). To add upon this, it is also recognized that ARM is perceived as a great complementing tool by consumers due to the fact that one can use ARM wherever one likes wherever one wants. Consumers do not always have time to go to the store when the store is open as work and other daily tasks come in the way. Consequently, there is little time to talk and think about HIP purchases during the day. For these people, ARM can be an especially helpful tool, allowing them to see and try the products in a more truthful context than just a picture, without needing to go to the store. Hence, even though it does not give the same experience as physically looking at the product, ARM is perceived as a better alternative than only reviewing an image. This is another finding not clearly addressed in previous literature.

5.2 Valuable

Our findings suggest consumers perceive ARM to bring value to them in the context of HIP as it provides several beneficial aspects for their overall purchase- and decision-making process. ARM offers consumers the ability to visualize the product which consequently eases the evaluation of whether the product is satisfying or not. As proposed by Wedel et al., (2020), this reduces the friction in the purchase process as ARM becomes a way to try out almost any product. As consumers perceive the purchase processes to become eased by being able to see the product in its intended context such as the home or on their bodies, it increases the perceived value of ARM. When products become more realistic in consumers' minds it usually implies ARM generates a greater value, which is in line with Hsu et al. (2021) and Daassi and Debbabi

(2021) who argue there is a more positive attitude towards ARM the more real the product is perceived.

Despite being able to view the product in its intended environment, ARM allows consumers to try products from any position, such as their homes, which is something they perceive as valuable. This, because it can help consumers avoid stressful environments and/or situations sometimes occurring in physical stores. Individuals that perceive it to be uncomfortable to try products while salespeople or family members are watching for instance, can thereby try the products calmly in private. Hence, our findings suggest this is an important factor that ARM brings, which has not been highlighted previously in literature. Accordingly, ARM facilitates the purchase process in several ways as it enables consumers to experience the product in new ways before buying it, which confirms the findings of Daassi and Debbabi (2021), Sung (2021), and Rauschnabel (2021). However, our findings add onto that as there might be other motivators for perceiving ARM as valuable. While literature has found and mainly argues ARM facilitates the purchase process by having an impact on the decision-making, our findings indicate there might be an emotional aspect as well for people that simply do not feel comfortable in store environments by any reason. Hence, ARM has the possibility to help people both learn more about products from their homes while also feeling more comfortable and calmer during the purchase decision. This, because one can take all the time one wants to think, look, and try different products without feeling the pressure to satisfy someone else, in this case a salesperson or family member accompanied in the store which ultimately can reduce stress and anxiety related to these situations. As a result, the consumer's purchase experience can be improved as it can be done on his or her own terms. It might also lead to consumers being more pleased with their purchase since they received the time they needed to make their decision. By giving consumers that perceive the in-store environment as uncomfortable the opportunity to try the products in a realistic way while still allowing them to avoid these situations, companies can attract these consumers to a greater extent, and improve their brand attitude as the purchase process becomes more convenient.

Further, as ARM improves the ability to visualize the product, our findings suggest consumers with greater confidence can choose to not visit the store or order multiple products with the purpose to compare them later. Consequently, ARM seems to have great value for consumers as it can minimize the need to order and pick up large, heavy, or ungainly products requiring

some effort to get in place, and that also usually have higher transportation costs. Previous findings suggest ARM can help consumers to save time in their information search while purchasing HIPs (Liu et al., 2020). While this is confirmed by the findings of this study, our result adds to that by indicating that time and effort might be saved in other parts of the purchase process as well related to sunk costs in transportation and shipping.

Despite facilitating the purchase, it was shown consumers perceive ARM as valuable in other ways too, not necessarily linked to the purchase. More precisely, ARM in the context of HIP was found to be exciting and entertaining for consumers and had consumers viewing their interaction as “playing” rather than solely information searching. As a result, our findings suggest consumers become more engaged with the AR-technology since they thought it was fun to use, which in turn indicates that ARM increases the consumers’ engagement in the information seeking process (Daassi & Debbabi, 2021; Berman & Pollack, 2021). Another reason for increased engagement derives from the fact that the consumer must take action to use the technology. As a result, it is shown that ARM in the context of HIP tends to be viewed as less intrusive compared to other forms of advertising. Further, as consumers find value from being entertained by the message, it indicates they also become more accepting of the technology and find it non-disturbing. In fact, our findings suggest consumers might not even think of ARM as advertising since they enjoy interacting with it and can decide themselves whether to use it or not. This is beneficial for the companies as they then can increase engagement in their products without needing to push the products on to the consumers, making the purchasing process feel more authentic while also creating room for the company to unconsciously impact the consumers’ purchase intentions in the ARM platform. As suggested by Drossos et al. (2014), Trivedi et al. (2019), and Liu et al. (2020), HIP advertising, in general, is perceived as less intrusive, which thereby can be partially confirmed by our findings as the interviewees expressed that the ARM technology for the HIPs was not seen as an annoying type of marketing. However, it cannot be concluded entirely whether it was the product type or the technology that impacted the consumers' perception the most in this case.

Moving on, literature suggests ARM has greater value for consumers when it comes to hedonic values which are associated with entertainment, joyfulness, and excitement (Dodoo & Youn, 2021; Hsu et al., 2021). However, our findings from exploring ARM in the context of HIP strongly indicate ARM provides value to consumers’ decision making in terms of informative

value as well, also referred to as utilitarian values. As consumers perceive they receive a more realistic view of the product with the help of ARM, which thereby eases their evaluation process and purchase decision overall, it can be stated ARM also has informative values in the context of HIP. Hence, in contrast to current literature, our findings state there is no clear evidence that ARM is solely perceived as valuable for consumers in terms of entertainment when it comes to HIP. This can be explained by the fact that consumers tend to value informative messages the more important the purchase is perceived. Hence, marketing for HIPs is found to benefit from being more focused on providing useful information rather than solely entertaining the consumers, which is in line with findings of Lou and Xie (2021), Stewart et al., (2019), and Trivedi et al., 2019.

Following, while ARM in the context of HIP has been found to provide value for consumers, our findings do not suggest there is a distinction in the type of value that consumers perceive. Rather, our findings indicate the perceived value of ARM is highly dependent on the individual and his or her attitude towards the purchase and the technology. In fact, our result suggests ARM can be both informative and entertaining which is beneficial for companies in the short term as informative values often facilitates the purchase, but also in the long-term as it is more likely to generate positive brand attitudes if there are entertaining values involved too (Hollebeek & Macky, 2019). In literature, Hsu et al., (2021) argue developers and practitioners of AR will benefit from providing features triggering excitement and emotional responses. While our findings agree with the point that it might form positive attitudes and provide important value to consumers, our suggestion would not be to solely focus on this since our findings show consumers also value ARM in the context of HIP as a great source of information. Accordingly, we believe it is of importance that practitioners evaluate and balance their features while integrating ARM in their marketing efforts.

5.3 Future Potential

Our findings suggest consumers feel a lot of enthusiasm and excitement when thinking about ARM. Consumers believe ARM has great potential for the future because of the many opportunities it provides and its potential to facilitate HIP purchasing processes if working as well as they believe it could. Thus, it is stated the technique must be improved by making the HIPs look more realistic as well as the platforms easier to use for ARM to reach its full potential.

As of today, our findings indicate consumers lose their interest and leave the ARM platform before receiving the desired result since the platforms are too complicated to understand. This is further discussed in section 5.4 (*Challenging*). However, despite this result, the consumers' perception is still that ARM will be improved in the future and become useful. Both because of the rapid pace of technological innovations, and the belief that ARM will be demanded by consumers in the future for most product categories, which indicates practitioners and software engineers will benefit from investing in ARM and focus on improving it. Hence, our findings support the statement of ARM shaping consumer behavior to support sales and customer service delivery strategies as suggested by Sung (2021) and Kumar (2021). However, adds to that by emphasizing that the ARM technology must be improved to do so.

Another interesting finding not underlined in previous literature is that the participants perceived ARM to have more potential for some HIPs than others. HIPs have different functions, some for instance exist to facilitate our lives, such as cars, strollers, and household appliances, whereas others exist to give our homes or ourselves a special look, like a lamp, art, or accessory. Our findings suggest ARM is perceived most useful when the design of the product is the leading factor of the purchase. This is because the main added value recognized with ARM is the ability to “see” the product in one's surroundings before purchasing. If one instead purchases for example an instrument or vehicle where the technical functions are more central, ARM will not be as useful since it cannot provide all of the information the consumer wants to compare and experience before purchasing to the same extent. Hence, it can be concluded ARM has the potential to provide valuable insight about a HIP's informational values, yet, not deliver all the information consumers request to feel completely comfortable with the purchase decision when there exist more layers of the products' functions except the ones one can see with the unaided eye. Thus, even though ARM brings the consumer closer to the physical reality than a picture or video, it is difficult to gain the true feeling of how the product for example sounds or feels, which are important factors in many HIP purchases.

Trivedi et al (2019) argue advertising for HIPs should focus on providing informative- rather than emotional value as it facilitates the evaluation process. This is both true and untrue when looking at our findings. Our result suggests the informative value is key and a factor many participants searched for when integrating with the ARM platform, for example, the sizes, proportions, colors, and different models of the product. These attributes are often important

for HIPs since these are products not commonly bought and that the consumers usually have specific contexts and places where the product will be used, where the sizes and functions matter. However, the aspects of how a product is experienced when one uses it were identified to be almost equally important for the consumer when deciding which HIP to purchase. Therefore, it can be argued that for many HIPs, the possibility to see the product in its physical context will always be the final denominator in whether the consumer will be happy with the product or not.

Accordingly, some key elements important for HIP are not and cannot be included in the ARM platforms, such as how comfortable a couch is, or how the car is to drive, which weakens the usefulness of ARM in some contexts. As earlier described, ARM can be assumed to be a great tool when the primary goal of the HIP is its design, size, and presentation. However, when the key aspect of the purchase is more technical and requires practical testing, ARM might not be as useful. Another ingredient that our findings suggest is important for consumers when doing HIP purchases is human interaction. Receiving help and answers from a salesperson or friend about how the product works and what product will suit one's needs the most was highly valued by many of the participants, as HIP purchases often are complex and about products one knows little about. This is another level the consumer does not receive in the ARM platforms. Hence, a risk we identify is that ARM can become more of a temporary hype for some HIPs. Intensive and amusing in the beginning due to its entertaining values, however, remains shortly as the consumer recognizes it does not help the actual purchase decision so much as not all elements important for HIP can be experienced with ARM as previously discussed.

Despite the above findings, our result indicates consumers perceive ARM to have great potential, with a lot of interest existing in using the technology again in future HIP purchases. ARM is something the participants believed everyone would want to try if given the opportunity. This is because ARM provides additional value that already existing offerings do not, being the possibility to confirm your thoughts and testing your ideas by receiving an indication of how the product would be perceived in its intended place (Daassi & Debbabi, 2021; Rauschnabel et al., 2022; Hsu et al., 2021). Therefore, it is also important to make the ARM platform easily accessible, because our findings suggest that the consumer will not search for the technique on his/her own, as it is perceived to be too time-consuming and insecure as one does not know if the product of interest will be found. It was also identified the participants

appreciated being able to decide if and when to integrate with the ARM platform when purchasing HIP, which suggests that companies potentially should use ARM more like a pull-based marketing strategy, which aligns with the recommendation from Trivedi et al., (2019). Hence, we propose ARM should not be used as an aggressive marketing tool to increase sales, instead, work to naturally accrue traffic and make it easier for consumers to find their desired product. Yet, one must keep in mind that ARM is a rather new technology that most consumers are unfamiliar with. Therefore, the ARM platforms must be pushed on to them to some extent for the consumer to see and try it.

5.4 Challenging

Despite the participants being overall positive towards ARM, they also expressed several negative perceptions of ARM which must illuminate. To start, it was found that both before, during, and after the ARM platforms were tested, the consumers perceived ARM as time-consuming. First, this perception emerged because the participants feared they were too untechnical to use the platform which in turn resulted in it requiring a lot of time and effort. Second, one must open or download the platform, wait for it to load, understand how to use it, and then also refurnish one's home, if purchasing furniture, to receive the best result. Hence, our findings suggest consumers perceive the technology to be too poor and inconvenient in relation to the time one needs to invest in it to receive an “acceptable” outcome. However, the more complex or important the purchase is, the more consumers tend to express a willingness to invest time to try it since the outcome could be more beneficial than the time consumed. Consequently, it becomes a form of cost versus benefit analysis performed by consumers to evaluate the value of using ARM (Kowalczyk et al., 2021). Relating to this, an important finding emerged that companies should incorporate the ARM platform into their already existing website instead of solely developing an app, as the consumer perceives it as significantly more attractive and efficient to use due to its accessibility. This is a finding not commonly addressed in previous literature, but that was suggested repeatedly by all participants in this study.

Following, only 50% of the participants in this thesis had heard of AR and ARM before. Since this study includes 20 participants, one cannot conclude this represents the overall awareness of ARM in society. However, it points towards a potential barrier of consumers not knowing about the technology, and thereby offers an indication that companies must focus on creating

awareness of it, and accessibility to it, if deciding to invest in it to not create negative spillovers (Sridhar & Fang, 2019). Berman and Pollack (2021) argue a less technological audience has a higher barrier to engaging with the ARM platforms compared to people interested in technologies, which our findings support. However, our results add to this by suggesting that regardless of the participants' technological capabilities, they still have the same demands on the technology in regards to how the virtual products should look and that the platforms must be easy to understand, use, and find. If ARM does not meet the expectations, it can negatively impact how the consumer views both the HIP and the company. If one, for example, wants to purchase a new watch and uses ARM to try it and it looks plastic, then, the perception of that specific watch might be negative, but it might also result in a view that the brand overall offers poor quality even though it might not be the reality. This example of poor quality of the AR function potentially leads to the consumers losing interest or not buying the HIP, even though he or she would have liked the product in the physical reality. Hence, due to society's high standards of technology, consumers expect the ARM platforms to provide realistic pictures of the product, which if not fulfilled, can result in negative outcomes for the companies in lost sales (Bleier et al., 2019). This represents a challenge with implementing ARM. The goal is to give the consumer a "real-life experience" with the product, despite not interacting with the product in the physical world. Hence, these goals are extremely challenging to meet since ARM does not interact with all human senses (Kowalczyk et al., 2021; Qin et al., 2021). Relating to expectations, an interesting notation can be made. Our findings strongly indicate companies face major challenges in meeting the high demands on technology from consumers. It appeared that consumers that had never heard about ARM previously and thus never had experienced these functions still became frustrated and disappointed when the technology did not work perfectly and after his or her preferences. It could have been assumed ARM provided new opportunities and added some value compared to when the consumers were unaware of the existence and potential of the technology, despite not working perfectly, as it for instance could indicate how furniture would look in the living room. However, instead, it created a problem that did not exist 30 minutes earlier which illustrates the consumers' high demands and expectations of technology today. They are used to high standards and expect nothing less, even though they just received a new tool with new possibilities they previously did not have.

Following, our results point toward another potential challenge for ARM related to trust and reliability. Despite consumers recognizing many benefits of ARM as outlined in 5.2 (*Value*),

our findings suggest ARM is not perceived as completely reliable today. A picture can deceive the eye in a way that looking at a product physically cannot. However, ARM is not about trying products physically but seeing a product virtually in a very realistic way. This is something consumers will have to accept if ARM is going to be a successful tool for eCommerce HIP purchases. Yet, software developers and engineers must also improve the technology to make the proportions, sizes, and colors more trustworthy. Because today, consumers do not think the products look “real”, nor feel confident that ARM provides truthful measurements even though it might. Meaning, that the finding does not suggest ARM does not provide reliable measurements, but that the consumers do not *trust* the ARM platforms to deliver reliable measurements. This, to a certain extent, conflicts with the findings of Daassi and Debbabi (2021), and Rauschnabel et al. (2022), who state that the increased interaction with a product enabled by ARM builds loyalty and trust that the product will meet one’s expectations. Instead, our finding is more aligned with de Ruyter et al. (2020) who discuss that ARM is not mainstream today partly because consumers believe it does not live up to the hype. The perception of ARM not being completely reliable can result in huge losses of potential ARM usage since the ability to visualize the product’s size in its intended place is one of the core values recognized by ARM. Hence, it is an important finding that future practitioners must consider if adopting the technology. It should however be noted that this perception of ARM derives from participants who all had limited experience with the technology prior to this study. It cannot be neglected that trust, as in many cases, requires some time to build and the more familiar consumers get with the technology and the better it meets the expectations, the trust in ARM might increase as well. This is in line with Rauschnabel et al., (2022) and Daassi and Debbabi (2021) who argue that increased experience will probably improve the attitude towards the technology as well. Accordingly, our findings suggest companies should consider that the quality and the exactness of attributes such as measurements and colors of their offerings in the ARM applications are perhaps more important than the number of products available. This as consumers tend to express a willingness to rely on the technology as it should reflect reality.

Speaking about unreliability, our findings also suggest ARM is perceived as a bit vulnerable to use in terms of privacy and safety (Watson et al., 2013). When interacting with any ARM platform, the company must ask for access to the consumer's camera. If the consumer denies this, he or she will not be able to use the platform, as for participant 6. The other participants gave access to their cameras, half without hesitating and the remaining with some restraints. It

was found that they felt insecure about who will receive their data and what they will do with that data, especially since they shared personal information in terms of videos and pictures of their homes (Urbonavicius et al., 2021). This finding aligns with Kumar (2021) who states ARM can be viewed as a bit intrusive. It is also found in the literature that this is how consumers usually think when talking about data sharing, however, it does not reflect how they act (Kokolakis, 2017). Consumers are used to accepting terms and conditions almost daily, making it potentially more likely for them to also do it for ARM platforms. This was later observed in the observation. Hence, the fact that ARM is perceived as intrusive is not necessarily something making the consumers not want to use ARM as they both understand that the camera must be used for ARM to work and since the interest in receiving an indication of how the HIP looks in one's home is greater than the fear of what will happen with their data.

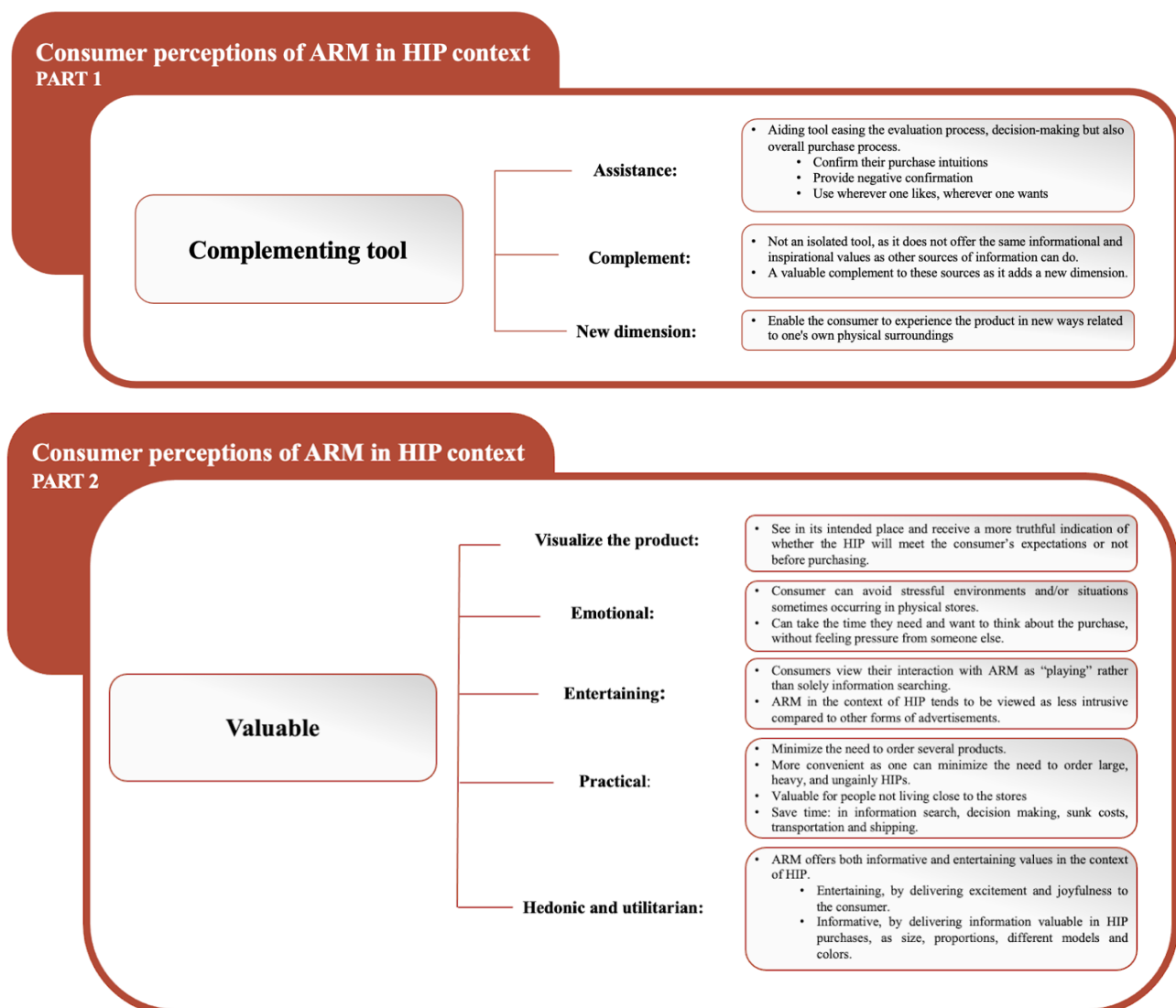
Furthermore, Wedel et al. (2020) state that AR apps' goal is to reduce the friction in online purchasing processes, which also our participants perceived ARM to do as outlined in 5.2 (*Value*). However, our participants also expressed several times during the observation that the ARM technology was hard to understand and use, which resulted in the experience being perceived as everything but frictionless. The participants became frustrated, irritated, and started questioning their capabilities. Excusing themselves for not being technical enough, while also emphasizing that the technology must be improved to reach its full potential. That it today feels like an unfinished tool due to the many features missing or not working. All participants were for example not able to get the virtual product into their room in the app, and when they finally saw the product in their virtual room the product was floating around instead of placed in its intended place. However, despite the frustration and many negative reactions and statements, such as ARM being time-consuming, unreliable, and not meeting the expectations, the participants were still more positive than negative towards the technology. Hence, also our findings are contradicting.

Our findings suggest consumers do not perceive ARM as a tool reducing friction, instead, more friction is experienced due to the technology not working in a way understandable for the consumer. Our findings also suggest ARM reduces friction as it enables consumers to try products in new ways by visualizing them in their homes and thereby understanding if they are a good fit or not. Hence, the participants are negative towards ARM when interacting with the technology, but positive when talking about it both before and after trying it, which is a very

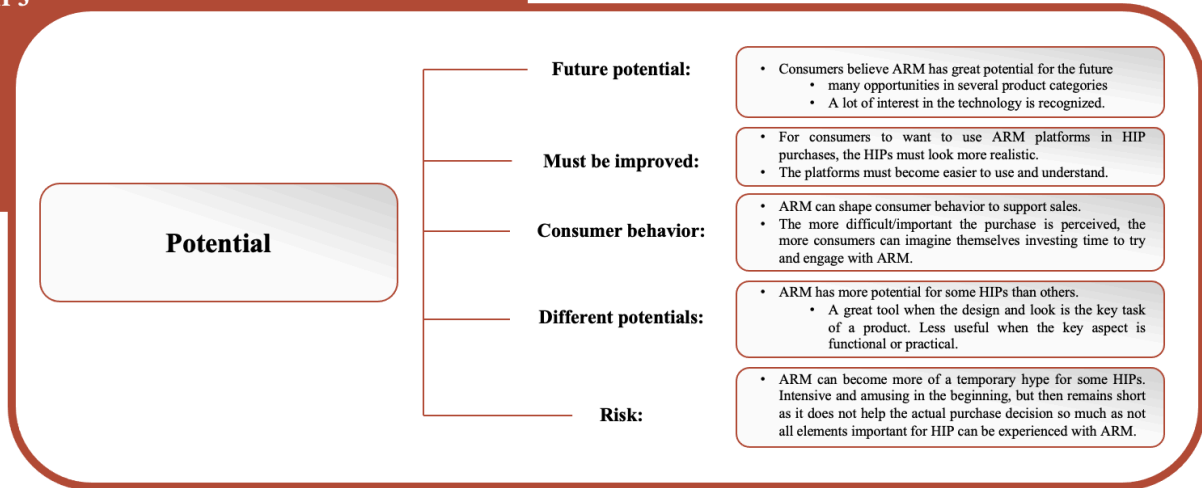
interesting finding. The reason for this conflicting result might be that despite ARM's shortcomings, the consumers still perceive ARM to be valuable. They are open to trying and using it because the potential benefits of using ARM are greater than the challenges it provides. Purchasing HIPs is a complex and time-consuming process in itself, requiring a lot of thought, comparing, and deciding. Therefore, all tools that can help with this process are perceived as valuable for the consumer, which makes them interested in using ARM.

Following, figure 5 presents a summary of the analysis based on the four themes.

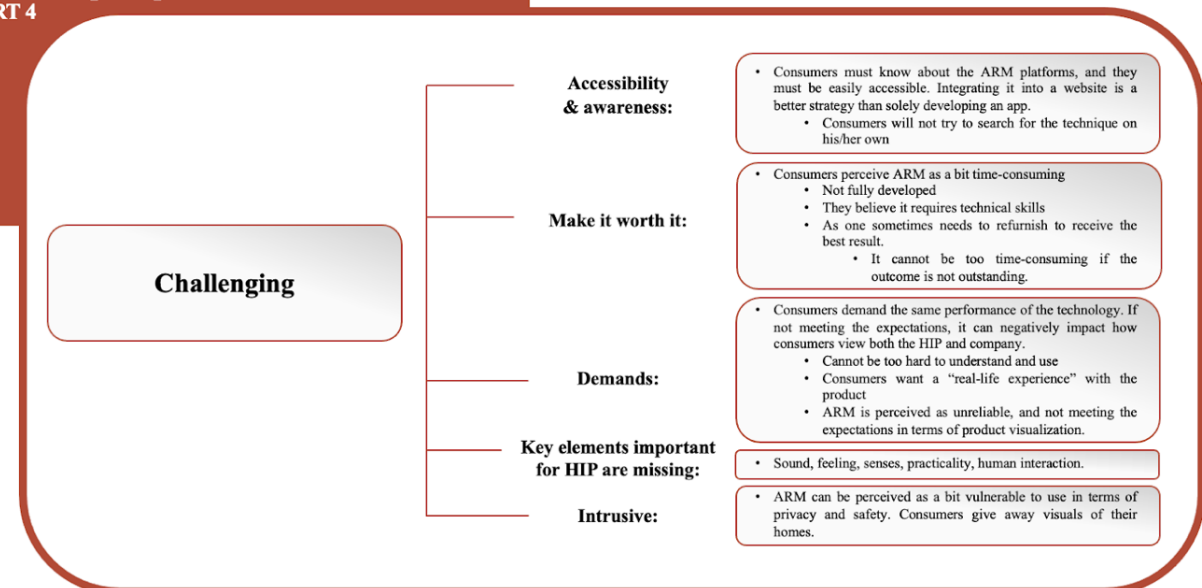
Figure 5
Summary of Analysis



Consumer perceptions of ARM in HIP context PART 3



Consumer perceptions of ARM in HIP context PART 4



6. Conclusion

In this chapter, a conclusion of the empirical findings and the analysis of these findings are presented. A summary of contributions to fulfill the purpose of this study is presented by outlining the answer to the research questions.

AR technology's debut on the global market cannot be neglected. As ARM enables consumers to experience products in new ways, research suggests ARM helps consumers make more informed decisions and thereby avoid sunk costs related to poor purchases. However, few researchers have devoted attention to understanding how consumers perceive ARM and if they have an interest in using it in real-life settings. This is an area important to study since the potential benefits identified in research will not occur if the consumer has no interest in engaging with ARM. Therefore, it is important knowledge for companies to understand whether, when, or how to use ARM to receive the best result. As ARM tends to have certain opportunities overlapping the common challenges related to HIP purchases, it was found to be enriching to explore how consumers perceive this form of marketing in the HIP context. Accordingly, this research aimed to explore consumers' perception and perceived usefulness of ARM in relevance to HIP. Empirical findings, and the analysis of these, helped answer the research questions:

How do consumers perceive ARM in the context of HIP, and why?

It was identified consumers perceive ARM as a valuable tool that consumers are interested in using when purchasing HIP. First, because of its many values both in regard to information and practical aspects. The ability to visualize the product in its intended place is perceived to aid both the evaluation and decision-making process as understanding and visualizing a HIP's features and proportions is a complex yet important task for many HIP purchases. Accordingly, ARM is experienced to help save time and transportation costs, while also offering the opportunity to avoid uncomfortable and stressful situations in store as one can "try" the products from home. Hence, ARM is perceived to not only offer informational but also emotional values to consumers. Further, ARM is perceived to be of greatest value if it is used as a complementing tool to other sources of information, as it does not offer the same inspirational and informational messages that one can receive in for example a picture or video.

However, negative perceptions also exist. First and foremost, the technology is perceived as difficult and inconvenient to use. Personal barriers are recognized such as a fear of not possessing the technical skills necessary to integrate with the technology, moreover, a belief that ARM is time-consuming. Hence, the perception is that the result might not always be worth the time spent due to the technology not being fully developed. The technique is also perceived as a bit unreliable, with consumers not trusting the ARM platforms to provide truthful proportions, colors, and visualizations. This, in combination with the perceived difficulty of using the technology, results in ARM not always meeting the consumers' expectations. However, it is still found consumers perceive ARM to have great potential for the future due to its many possible areas of usage and ability to help consumers in their complex HIP purchases. The common perception is that ARM must be improved by making the HIPs look more realistic as well as advancing the platform's user experience (UX) if consumers are going to integrate with the technology. Although, as ARM develops and improves, consumers think ARM will be standard practice in the future as it is a technology they believe they will benefit to use, especially for people not having the time or capacity to visit the stores.

Can ARM be useful for consumers when purchasing HIP and if so, how?

Due to the many recognized values of ARM identified in this study, we conclude ARM can be useful for HIP purchases in the sense that it makes the purchase decision more convenient. This is achieved by ARM helping to confirm or reject their perceptions of a product, which further helps save time and sunk costs. ARM is also helpful in the sense that one can use the technology and “try” different products whenever one likes wherever one wants. Yet, it is found ARM is more useful for some HIPs than others. ARM is perceived as most useful when the design of the product is the critical factor in the purchase. This is because the main benefit recognized with ARM is the ability to visualize the product in a realistic setting before purchasing. Even though ARM brings the consumer closer to the physical reality than a picture or video, one cannot gain the true feeling of how the product for example sounds, feels, or works, which are important factors in many HIP purchases. Especially when the technological or practical aspect is the main reason for the purchase. However, it is found that the more difficult or important the purchase is, the more time the consumers are willing to invest in using ARM solutions since the outcome then potentially is more beneficial than the time consumed. Hence, it is concluded ARM can be useful and value-adding when purchasing HIPs.

7. Discussion

This chapter discusses the theoretical as well as managerial implications of the conducted study. Following, the limitations of the conducted study are addressed and outlined. Lastly, potential areas for future research are presented.

7.1 Theoretical Contribution

In recent years, researchers have started to conduct research on ARM within sales, marketing, and eCommerce. However, prior literature mainly emphasizes ARM's potential advantages from an objective and technological perspective and largely disregards the users' voice about ARM, in this case, the consumers. The majority of studies have also been conducted in controlled settings with the goal to receive quantitative rather than qualitative results. Consequently, it has remained unclear how and why consumers perceive ARM despite its many quantified benefits and areas of usage. Current ARM literature also has an underlying assumption that the perception and usage of ARM are equal in all settings, despite the knowledge of marketing tactics being dissimilar depending on product type (Bart et al., 2014). Hence, exploration of how ARM should be used within specific product contexts is also disregarded in the literature. We aimed to help fulfill these gaps by exploring how consumers perceive ARM within the context of HIP.

Our study adds to upper echelon literature by providing insights into how consumers perceive today's ARM technology within the context of HIP, but also their perceptions of its possible usefulness. Specifically, our study confirms the benefits outlined in previous literature, while also shedding light on the consumers' negative perceptions of ARM, which is something not commonly addressed in research. Our main contributions are first, the finding that ARM is perceived as a complementing tool rather than a substitute for other marketing tactics. Hence, marketers should implement ARM into their already established marketing strategies and also integrate the ARM platform into their existing website instead of solely developing an app, as the consumer then experiences it more attractive to use. Second, our findings indicate ARM is perceived as more useful for some HIPs than others and should therefore not be assumed to be a crucial technique for all companies to implement. Further, while extant literature mainly argues ARM facilitates the purchase process by having an impact on the decision-making, our

findings indicate there might be an emotional aspect as well for people that simply do not feel comfortable in-store environments for any reason, or do not have time or the possibility to go to the store.

Finally, to our knowledge, there have been no structured endeavors to summarize the current advantages and challenges of using AR as a marketing tool to impact branding and sales to this date. To provide a grasp of the overall potential of the ARM technique and thus contribute to the literature, our study included a review of existing research on the number of advantages and challenges related to ARM. These were grouped into three categories, *experiential*, *emotional*, and *economic*, and are presented in Table 1 on page 13. We also, to our knowledge, made a first attempt to compare and analyze current literature on both ARM and HIP to conduct a compilation of whether ARM can be relevant for HIP.

7.1.1 New benefits and challenges identified related to ARM

As aforementioned, Table 1 presented a summary of the identified advantages and challenges related to ARM in extant research. After analyzing our findings in regards to the research questions, new benefits and challenges were identified adding to the ones recognized in the literature. Regarding challenges, it was first identified consumers might not rely on the ARM technology, due to the proportions being difficult to validate. Further, current literature mainly talks about ARM confirming purchase intentions positively, however, our findings suggest the interaction with ARM platforms can also result in people not wanting to purchase a product he or she would have wanted in the physical reality, because of its bad representation in AR. It was also identified that the usage of ARM can negatively influence the self-image of the consumer, as he or she can feel incompetent when not understanding the technology. Our findings also point towards a risk that the fact that the consumers can see the product on themselves can lead to them not wanting to buy the product, as the models in the pictures sometimes help sell the product as it usually looks perfect on them. It was also recognized that ARM is perceived as time-consuming, something not highlighted in previous literature. A final challenge identified is how to bring awareness and accessibility to the ARM platforms. Being aware of its existence and having easy access to it is key if wanting consumers to integrate with it.

Also, new benefits were identified. First, that ARM can help consumers feel calmer when purchasing HIPs, as they do not need to be present in the store looking at different products with a salesperson staring and wanting to help. Instead, one can sit at home and try the products at their own pace without feeling stressed or the need to “satisfy” someone else. Another benefit is that ARM enables consumers to integrate with the HIP at times suitable for him or her, for example during the evenings when the stores are closed. Further, all people cannot go to the store, either due to distance or other physical restraints. For these people, ARM can be of special importance. Two final benefits recognized were first, that ARM might not be perceived as a marketing tool because of its entertaining value and the fact that consumers must take action to use it, increasing the likelihood for engagement and resulting in it being viewed as less intrusive compared to other forms of advertising. Second, despite the many shortcomings of the technology today, consumers are positive towards the technology and open to trying it as it is perceived to offer value in ways other marketing tactics do not, which potentially will help the purchase decision more than it will complicate it.

7.2 Managerial Implications

Beyond our academic contribution, increasing the knowledge about how consumers perceive ARM within the HIP context also yields interesting findings for practitioners. These findings can help managers within marketing, sales, engineering, and other positions in several ways to decide which technologies to invest in.

ARM is a rather new technology starting to appear on the market in different shapes and places, while also receiving increased attention in the literature. As stated, \$17.67 billion were invested in AR in 2020 by companies, and by the end of this decade, the global AR spending is forecasted to be \$340 billion (Grand View Research, 2021; Berman & Pollack, 2021). Concurrently, many researchers argue ARM is disruptive and that if companies do not invest in it, they risk becoming obsolete (Sung, 2021). Hence, it is a technology most managers in the selling industry encounter in one way or another and thereby must decide if to invest in or not. Here, our findings help managers understand ARM’s most perceived values in HIP purchases as well as its least perceived usefulness. For example, our findings suggest ARM is not perceived as particularly helpful for companies selling products where the sound or perceived experience of using the product is key, as with a musical instrument or a stroller. Whereas, ARM is perceived as a great,

and perhaps even mandatory tool in the future, for products when the design is the core aspect, for example, accessories and furnishings.

Our findings also pinpoint many of the negative perceptions consumers have of ARM, which can help marketing managers understand where ARM is lacking, and then look at their offering to conclude if they believe ARM is a good marketing strategy for them or not. These negative perceptions can also be of interest to data engineers, and others working with the development of AR technology, as it can help them understand how to improve the tool to generate even greater interest from consumers and thereby increase sales. Even though this study does not focus on the UX aspect of ARM, the result still offers an indication of what consumers perceive most lacking with ARM, and what companies therefore must focus on to improve to make more people interested in using the technology.

7.3 Limitations

To provide full transparency and honesty to this study, we wish to acknowledge limitations found in the conduction of the research process. First, the interviews that are part of this study were held in Swedish as it was found most suitable due to it being the authors' and the participants' native language. This implies that the data collected had to be translated into English. Although cross-checking of the translations was performed by us as the authors with a focus on the wording as well as context, it should be claimed that we cannot claim that our translations are fully correct. As a result, some level of bias cannot be overseen. However, we still argue this was the best strategy since it is believed that the risk for misinterpretations and wrong sayings from what the participants meant would have been greater if the participants would have needed to translate their Swedish thoughts to English wording. Further, we provided a thorough and detailed description of each step of this study's process including method, data collection, and analysis which enables similar studies to be performed and our belief is that these would yield similar results.

Another limitation of this study relates to the selection of participants. Our purposive sampling strategy implied we selected participants based on our knowledge and what we as the authors found most valuable for this study. The result was that one of us to some extent knew or was familiar with each participant, which can result in both benefits and challenges. Potential

benefits are that by knowing the participant, he or she might be more comfortable in the situation which increases the likelihood that responses become more honest. At the same time, there is a risk that the participant wants to be as helpful as possible to us, and thus provide the answer he or she thinks is “right” for our study. However, these factors are to some extent present in all studies regardless of the relation between the researcher and the participant and we took action to minimize the occurrence of this by making sure to address to each participant that there were no right or wrong answers and that we had the greatest value by obtaining their true opinions.

Third, one limitation relates to the chosen research approach in this study. The qualitative design, combined with the performance of contextual interviews including semi-structured interviews and observations, implies the insights and findings are subjectively shaped by each participant but also our understanding and perception of these. This means we valued their insights and contributions as highly relevant and valuable but yet, we cannot prove this objectively. Hence, a limitation can also be us as the authors, as there exists a risk of us misinterpreting discussions, emotions, and body language expressed by the respondents during the interviews. To avoid this, we tried to not mislead the interviews or observations in any specific direction due to our prior knowledge. Here, our pre-developed interview guide with open-ended questions helped. It was also of great value that we were two people conducting the study, as we then could help each other to focus on the study’s purpose, discuss the result, and avoid including any personal thoughts or interpretations.

Two final limitations are first, the fact that we adopted a quite broad definition of HIP without considering in detail the characteristics the consumer considers when perceiving a product as highly involving. This was done as the goal of this study was not to identify how consumers identify HIPs and why, but instead to use HIP as a way for the consumer to perceive ARM in a context they know of and actually can use it in. However, we cannot assume the study would have received the same result if we would have had another more definite definition of HIP. Yet, it was identified that all participants explained and talked about HIP almost the same way, using the same examples of what HIPs are for them. Second, the participants only tried mobile ARM applications in the observation, as those are easily accessible and an ARM platform all people with a smartphone can access. However, other forms of ARM exist, for example, stationary devices (like AR mirrors in stores), and wearable devices (for example, AR glasses),

but these were not considered in this thesis. Hence, it cannot be neglected that the result could have differed if another form of ARM would have been tried instead.

7.4 Future Research

Following our conclusion of this study, the practical and theoretical implications as well as the limitations outlined in previous sections, we provide several potential areas of study within ARM we deem deserve attention in future research.

As ARM is to some extent a rather new technology and field of research there are still gaps to explore. First, this study focuses on consumers' perception of ARM in a HIP context. As a common categorization of products are HIP and low involvement products, where the latter did not receive attention in this study, it might be interesting to study as well. It would enable exploration of the perception of ARM in other contexts and potentially see if there are differences that increase the understanding of how, where, and when ARM is most suitable.

Second, this study focuses on mobile ARM solely. As ARM can take other forms and be applied for instance in stores or via computers, it could be interesting to explore these. Further, to gain an even deeper understanding of ARM, it would be of value to study consumers in real purchase situations. Although we aimed to make the context as realistic as possible by asking the consumers to come up with a product perceived as important for them and discuss earlier purchases they made, as well as offer them to use several ARM applications during our contextual interviews, it cannot be neglected that there could be some difference between their actions and/or perceptions if they actually intended to purchase this product. Hence, studies exploring consumers' behavior in a real-life situation could contribute to further understanding of the perceptions of ARM.

Our findings did also reveal that ARM could negatively impact how the consumers perceived or felt about themselves. For instance, a pattern emerged that consumers felt “too untechnical” or that they lacked understanding when the technology did not work, which made them insecure and lose confidence. Further, it was emergent that the ability to try on the product on themselves such as the glasses, caused some harm to self-confidence as participants felt ugly. A piece of

increased knowledge regarding ARM's impact on consumers' self-esteem would therefore be of value for future studies.

Reference List

- Agrawal, A.J. (2018). 13 reasons augmented reality hasn't achieved widespread adoption. *TNW*.
<https://thenextweb.com/news/3-reasons-augmented-reality-hasnt-achieved-widespread-adoption>
- Alimamy, S., & Al-Imamy, S. (2021). Customer perceived value through quality augmented reality experiences in retail: The mediating effect of customer attitudes. *Journal of Marketing Communications*, 28(4), 428-447. <https://doi.org/10.1080/13527266.2021.1897648>
- Alimamy, S., & Gnoth, J. (2022). I want it my way! the effect of perceptions of personalization through augmented reality and online shopping on customer intentions to co-create value. *Computers in Human Behavior*, 128, 107105. <https://doi.org/10.1016/j.chb.2021.107105>
- Anney, V. N. (2014). Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 5(2), 272-281.
- Arghashi, V., & Yuksel, C. A. (2022). Interactivity, Inspiration, and Perceived Usefulness! How retailers' AR-apps improve consumer engagement through flow. *Journal of Retailing and Consumer Services*, 64, 102756. <https://doi.org/10.1016/j.jretconser.2021.102756>
- Azungah, T. (2018). Qualitative Research: Deductive and Inductive Approaches to Data Analysis. *Qualitative Research Journal*, 18(4), 383-400. <https://doi.org/10.1108/QRJ-D-18-00035>
- Bart, Y., Stephen, A. T., & Sarvary, M. (2014). Which Products Are Best Suited to Mobile Advertising? A Field Study of Mobile Display Advertising Effects on Consumer Attitudes and Intentions. *Journal of Marketing Research*, 51(3), 270-285. <https://doi.org/10.1509/jmr.13.0503>
- Bell, E. and Bryman, A. (2007) 'The ethics of management research: An exploratory content analysis'. *British Journal of Management*, 18(1), 63-77. <https://doi.org/10.1111/j.1467-8551.2006.00487.x>

- Berman, B. & Pollack, D. (2021). Strategies for the successful implementation of augmented reality. *Business Horizons*, 64(5), 621-630. <https://doi.org/10.1016/j.bushor.2021.02.027>
- Bleier, A., Harmeling, C. M., & Palmatier, R. W. (2019). Creating effective online customer experiences *Journal of Marketing*, 83 (2), 98-119. <https://doi.org/10.1177/0022242918809930>
- Bojanic, D. C., & Warnick, R. B. (2012). The Role of Purchase Decision Involvement in a Special Event. *Journal of Travel Research*, 51(3), 357-366. <https://doi.org/10.1177/0047287511418364>
- Boland, M. (March 2019). *Data point of the week: 3000+ AR apps in the wild*. AR Insider. <https://arinsider.co/2019/03/18/data-point-of-the-week-3000-ar-apps-in-the-wild/>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brus, H. (21 maj 2015). Att göra narr av "jobbiga patienter" på sociala medier. *Dagens Medicin*. <http://www.dagensmedicin.se/blogg/hanna-brus/2015/05/21/att-gora-narr-av-jobbiga-patienter-pa-sociala-medier/>
- Chylinski, M., Heller, J., Hilken, T., Keeling, D. I., Mahr, D., & de Ruyter, K. (2020). Augmented reality marketing: A technology-enabled approach to situated customer experience. *Australasian Marketing Journal*, 28(4), 374-384. <https://doi.org/10.1016/j.ausmj.2020.04.004>
- Collis, J., & Hussey, R. (2014). *Business Research*. Basingstoke (4th ed.). Palgrave Macmillan.
- Daassi, M., & Debbabi, S. (2021). Intention to reuse AR-based apps: The combined role of the sense of immersion, product presence and perceived realism. *Information and Management*, 58(4), 103453. <https://doi.org/10.1016/j.im.2021.103453>
- de Ruyter, K., Heller, J., Hilken, T., Chylinski, M., Keeling, D. I., & Mahr, D. (2020). Seeing with the Customer's Eye: Exploring the Challenges and Opportunities of AR Advertising. *Journal of Advertising*, 49(2), 109-124. <https://doi.org/10.1080/00913367.2020.1740123>

- DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314–321. <https://doi.org/10.1111/j.1365-2929.2006.02418.x>
- Directive 95/46/EC. *General Data Protection Regulation*. The European Parliament, Council of The European Union, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679>
- Dodoo, N. A., & Youn, S. (2021). Snapping and chatting away: Consumer motivations for and outcomes of interacting with Snapchat AR ad lens. *Telematics and Informatics*, 57, 101514. <https://doi.org/10.1016/j.tele.2020.101514>
- Drossos, D. A., Kokkinaki, F., Giaglis, G. M., & Fouskas, K. G. (2014). The effects of product involvement and impulse buying on purchase intentions in mobile text advertising. *Electronic Commerce Research and Applications*, 13(6) 423-430. <https://doi.org/10.1016/j.elerap.2014.08.003>
- Duda, S., Warburton, C., Black, N. (2020). Contextual Research: Why We Need to Research in Context to Deliver Great Products. In: Kurosu, M. (Eds.), Human-Computer Interaction. Design and User Experience: Thematic Area. HCII 2020. *Lecture Notes in Computer Science (LNISA)*, 33-49. Springer. https://doi.org/10.1007/978-3-030-49059-1_3
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjalouoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., & Raman, R. (2020). Setting the Future of Digital and Social Media Marketing Research: Perspectives and Research Propositions. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- Easterby-Smith, M., Thorpe, R., Jackson, P.R., & Jaspersen, L.J. (2018). *Management & Business Research* (6th ed). SAGE.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>

- Grand View Research. (2021). *Augmented reality market size, share & trends analysis report by component, by display (HMD & smart glass, HUD, handheld devices), by application, by region, and segment forecasts, 2021- 2030*. (978-1-68038-820-6). Grand View Research Inc. <https://www.grandviewresearch.com/industry-analysis/augmented-reality-market>
- Griffith, D.A, Krampf, R. F., & Palmer, J. W. (2001). The Role of Interface in Electronic Commerce: Consumer Involvement with Print Versus On-Line Catalogs. *International Journal of Electronic Commerce*, 5(4), 135-15, <https://doi.org/10.1080/10864415.2001.1104421>
- Guba, E., G. (1981). Criteria for Assessing the Trustworthiness of Naturalistic Inquiries. *Educational Communication and Technology*, 29(2), 75-91 . <https://doi.org/10.1007/BF02766777>
- Haumer, F., Kolo, C., & Reiners, S. (2020). The impact of augmented reality experiential marketing on brand equity and buying intention. *Journal of Brand Strategy*, 8(4), 368-387.
- Hinsch, C., Felix, R., & Rauschnabel, P. A. (2020). Nostalgia beats the wow-effect: Inspiration, awe and meaningful associations in augmented reality marketing. *Journal of Retailing and Consumer Services*, 53, 101987. <https://doi.org/10.1016/j.jretconser.2019.101987>
- Hollebeek, L.D., & K. Macky. (2019). Digital content marketing's role in fostering consumer engagement, trust, and value: Framework, fundamental propositions, and implications. *Journal of Interactive Marketing* 45, 27–41. <https://doi.org/10.1016/j.intmar.2018.07.003>
- Holtzblatt, K., & Beyer, H. (2017). *Contextual Design: Design for Life*, (2nd ed). Morgan Kaufman.
- Hsu, S. H., Tsou, H., & Chen, J. (2021). “Yes, we do. why not use augmented reality?” customer responses to experiential presentations of AR-based applications. *Journal of Retailing and Consumer Services*, 62. <https://doi.org/10.1016/j.jretconser.2021.102649>
- Javornik, A., Kostopoulou, E., Rogers, Y., Fatah gen Schieck, A., Koutsolampros, P., Maria Moutinho, A., & Julier, S. (2019). An experimental study on the role of augmented reality

- content type in an outdoor site exploration. *Behaviour & Information Technology*, 38(1), 9-27. <https://doi.org/10.1080/0144929X.2018.1505950>
- Kokolakis. (2017). Privacy attitudes and privacy behaviour: A review of current research on the privacy paradox phenomenon. *Computers & Security*, 64, 122–134. <https://doi.org/10.1016/j.cose.2015.07.002>
- Kowalczyk, P., Siepmann, C., & Adler, J. (2021). Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study. *Journal of Business Research*, 124, 657–373. <https://doi.org/10.1016/j.jbusres.2020.10.050>
- Kumar, H. (2021). Augmented reality in online retailing: A systematic review and research agenda. *International Journal of Retail and Distribution Management*, ahead of print (ahead-of-print). <https://doi.org/10.1108/IJRDM-06-2021-0287>
- Lincoln, Y. S., & Guba, E. G. (1985). Establishing trustworthiness. *Naturalistic inquiry*, 289(331), 289-327. [https://doi.org/10.1016/0147-1767\(85\)90062-8](https://doi.org/10.1016/0147-1767(85)90062-8)
- Liu, Q., Zhang, X., Huang, S., Zhang, L., & Zhao, Y. (2020). Exploring Consumers' Buying Behavior in a Large Online Promotion Activity: The Role of Psychological Distance and Involvement. *Journal of Theoretical and Applied Electronic Commerce Research*, 15(1), 66–80. <https://doi.org/10.4067/S0718-18762020000100106>
- Lou, C., & Xie, Q. (2021). Something social, something entertaining? How digital content marketing augments consumer experience and brand loyalty. *International Journal of Advertising*, 40(3), 376-402, <https://doi.org/10.1080/02650487.2020.1788311>
- Martin. C.L. (1998). Relationship marketing: a high-involvement product attribute approach. *The Journal of Product & Brand Management*, 7(1), 6–26. <https://doi.org/10.1108/10610429810209700>
- Nayeem, T., & Casidy, R. (2013). The role of external influences in high involvement purchase behaviour. *Marketing Intelligence & Planning*, 31(7), 732-745. <https://doi-org.proxy.library.ju.se/10.1108/MIP-02-2013-0030>

- Patton, M.Q. (2002) *Qualitative Research and Evaluation Methods* (3rd ed). Thousand Oaks, CA: Sage
- Patton, M.Q. (2015). *Qualitative Research and Evaluation Methods* (4th ed). Thousand Oaks, CA: Sage
- Qin, H., Osatuyi, B., & Xu, L. (2021). How mobile augmented reality applications affect continuous use and purchase intentions: A cognition-affect-conation perspective. *Journal of Retailing and Consumer Services*, 63, 102680. <https://doi.org/10.1016/j.jretconser.2021.102680>
- Radder, L., & Huang, W. (2008). High-involvement and low-involvement products. *Journal of Fashion Marketing and Management*, 12(2), 232–243. <https://doi.org/10.1108/13612020810874908>
- Rauschnabel P. A., Felix, R., & Hinsch, C. (2019). Augmented reality marketing: How mobile AR-apps can improve brands through inspiration. *Journal of Retailing and Consumer Services*, 49, 43–53. <https://doi.org/10.1016/j.jretconser.2019.03.004>
- Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. (2020). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>.
- Rauschnabel, P. A. (2021). Augmented reality is eating the real-world! the substitution of physical products by holograms. *International Journal of Information Management*, 57, 102279. <https://doi.org/10.1016/j.ijinfomgt.2020.102279>
- Rauschnabel, P. A., Babin, B. J., tom Dieck, M. C., Krey, N., & Jung, T. (2022). What is augmented reality marketing? its definition, complexity, and future. *Journal of Business Research*, 142, 1140-1150. <https://doi.org/10.1016/j.jbusres.2021.12.084>
- Santandreu, J., & Shurden, C, M. (2017). Purchase Decisions for High Involvement Products: The New Generation of Buyers. *Journal of Marketing Development and Competitiveness*, 11(2), 88.

- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th. ed.). Pearson Education.
- Scholz, J., & Smith, A. N. (2016). Augmented reality: Designing immersive experiences that maximize consumer engagement. *Business Horizons*, 59(2), 149–161. <https://doi.org/10.1016/j.bushor.2015.10.003>
- Sihi, D. (2018). Home sweet virtual home: The use of virtual and augmented reality technologies in high involvement purchase decisions. *Journal of Research in Interactive Marketing*, 12(4), 398–417. <https://doi-org.proxy.library.ju.se/10.1108/JRIM-01-2018-0019>
- Smink, A. R., van Reijmersdal, E. A., van Noort, G., & Neijens, P. C. (2020). Shopping in augmented reality: The effects of spatial presence, personalization and intrusiveness on app and brand responses. *Journal of Business Research*, 118, 474–485. <https://doi.org/10.1016/j.jbusres.2020.07.018>
- Sridhar, S., & Fang, E. (2019). New vistas for marketing strategy: digital, data-rich, and developing market (D3) environments. *Journal of the Academy of Marketing Science*, 47(6), 977–985. <https://doi.org/10.1007/s11747-019-00698-y>
- Statista. (February 2022). *Number of smartphone users worldwide from 2016 to 2027*. <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>
- Stewart, K., Kammer-Kerwick, M., Auchter, A., Koh, H. E., Dunn, M. E., & Cunningham, I. (2019). Examining digital video advertising (DVA) effectiveness. *European Journal of Marketing*, 53(11), 2451–2479. <https://doi.org/10.1108/EJM-11-2016-0619>
- Sung, E. (2021). The effects of augmented reality mobile app advertising: Viral marketing via shared social experience. *Journal of Business Research*, 122, 75–87. <https://doi.org/10.1016/j.jbusres.2020.08.034>
- Trivedi, R., Teichert, T., & Hardeck, D. (2019). Effectiveness of pull-based print advertising with QR codes. *European Journal of Marketing*, 54(1), 145–167. <https://doi.org/10.1108/EJM-06-2018-0383>

- Urbonavicius, D., Degutis, M., Zimaitis, I., Kaduskeviciute, V., & Skare, V. (2021). From social networking to willingness to disclose personal data when shopping online: Modelling in the context of social exchange theory. *Journal of Business Research*, 136, 76–85. <https://doi.org/10.1016/j.jbusres.2021.07.031>
- Watson, C., McCarthy, J., & Rowley, J. (2013). Consumer attitudes towards mobile marketing in the smart phone era. *International Journal of Information Management*, 33(5), 840–849. <https://doi.org/10.1016/j.ijinfomgt.2013.06.004>
- Wedel, M., Bigné, E., & Zhang, J. (2020). Virtual and augmented reality: Advancing research in consumer marketing. *International Journal of Research in Marketing*, 37(3), 443–465. <https://doi.org/10.1016/j.ijresmar.2020.04.004>
- Zaichkowsky, J. L. (1986). Conceptualizing Involvement. *Journal of Advertising*, 15(2), 4–34. <https://doi.org/10.1080/00913367.1986.10672999>

Appendix

Appendix A – Table of Keywords

Keywords Table			
Concept	ARM	High Involvement Products	Consumer Perceptions
Synonyms	Augmented reality advertising, AR in marketing,	-	Attitude, Approach, Belief, Opinion, Willingness
Alternative Spelling	Augmented reality marketing	High involvement product, Involving products	Consumer's attitude, Customers perceptions
Related Terms	Digital marketing, Digital advertising	High involvement decisions, High engagement in products.	Consumer's attitudes towards digital marketing
Broader Terms	Technology in marketing	High involvement purchases, Adoption of new technology	Consumer's perceptions of new technologies
Narrower Terms	AR AND Marketing	Expensive products, Complex products	Consumers' attitudes towards ARM

Appendix B - Articles in Frame of Reference

Index	Reference	Type of study	Theory used/ Models/ Keywords	Key ideas and findings	Future Research	Keywords used	Impact factor & Portal
1	Kowalczyk, P., Siepmann, C., & Adler, J. (2021). Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study. <i>Journal of Business Research</i> , 124, 357–373. doi:10.1016/j.jbusres.2020.10.050	Quant. laboratory experiment with 400 participants. This study builds on the experiential hierarchy model (EHM)	Augmented reality AR marketing Perceived reality congruence Consumer response system E-commerce Product presentations	- The results reveal that AR outperforms web-based product presentations by generating greater immersion and enjoyment, whereas the opposite is true for media usefulness. - The findings further show that behavioral responses (reuse and purchase intention) are formed by affective (immersion, enjoyment, product liking) and cognitive (media usefulness, choice confidence) responses to the AR characteristics (interactivity, system quality, product informativeness, reality congruence). Since the reuse intentions of AR apps result from enjoyment and usefulness, retailers should improve system quality, product informativeness, and reality congruence to enhance media usefulness and interactivity to increase enjoyment. - To achieve high purchase intentions, they should also increase interactivity, as it boosts product liking and in turn ensures confidence about the chosen products.	- Identify and examine further experiential factors in the cognitive and ultimately in the behavioral states in the AR context. For example, qualitative research is well-suited to shed light on the mental events and private processes associated with the consumption and usage of AR technologies in retailing. - Future research should examine post-purchase product satisfaction to determine if AR technologies have the potential to decrease return rates in online channels.	Marketing OR advertising AND AR	7.550 Primo

Appendix C – Interview Guide

PART 1: HIP

The focus was to get a view of the participant's general understanding of HIP and understand the current behavior related to HIP purchases as of today

Can you describe how the process usually looks when you purchase a product of your choosing that fits the description I just explained (definition of HIP)?

How did you compare between products and what made you choose the product?

What information do you search for, is important for you, in order to make a high involvement purchase decision with confidence?

What channels do you normally utilize to find the information you search? (e.g. social media, web sites, customer service, friends...)

Tell us a bit more about what is important as you are about to purchase this product? (e.g. see it, feel it, price, functions...)

PART 2: Familiarity with ARM

This part focused on the participants previous experience with ARM and its perception of using ARM in the context of HIP

Are you familiar with Augmented Reality (AR)?

Have you ever been in contact with AR in your daily life or at work?

- If yes, when and in what context?
- If yes, how was your experience of it?

If you think of the HIP discussed in the first part, do you perceive that those companies could use ARM to provide any value for you or their customers?

Imagine purchasing a HIP, could you think of any time you would have used an ARM tool?

Have you ever searched for this kind of tool when buying a HIP?

Based on your current knowledge of AR, can you explain if you could find it useful to use when purchasing HIPs?

What is your perception whether ARM could affect your HIP purchase decision?
Why or why not could it be helpful?

Now when you know that the technology exists, is it something you will search for in your future HIP purchases?

PART 3: Observation - Test of ARM Applications

This part focused on the hands-on experience of ARM tools. The participants were observed while interacting with ARM on a smartphone, while questions focused solely on clarifying comments.

The participant downloaded one out of four ARM tools on his or her smartphone. The remaining three were available and tested on smartphones provided by the researchers.

The researchers observe the interactions and take notes on spontaneous reactions and comments while also asking follow-up questions related to especially valuable insights for the research purpose.

- *E.g. Why do you feel that way? Why is that your impression? What do you mean by that?*

PART 4: Perception of AR: Post-Experience

Aimed to clarify the perception of ARM that emerged during interaction and questions focused on understanding the participants view and intention of using ARM in the context of HIP purchase.

How was your overall experience with the ARM tools?

Were there any functions that you perceived useful? Why/Why not?

Can you give any example of a function that you missed and in that case, why?

Can you see any challenges with getting consumers testing these tools at HIP purchases?

If you would explain to your friends that this ARM-technology exists, how do you think his or her attitude towards testing it would be?

How do you perceive this type of marketing in comparison to traditional marketing such as pictures, advertisement, and social media?

Do you feel ARM provided any value? Why/Why not?

Based on what you know today, what is your perception of using ARM in HIP contexts in the future?

If you imagine yourself buying a HIP, what would make you want to use an ARM tool?

How likely is it that you would use ARM today?

Can you imagine any product that has not yet been mentioned that could benefit from using ARM?

Appendix D – Participant Consent and GDPR Information Sheet

Type of Study: Master thesis to receive M.Sc. in Business Administration, Digital Business.

Introduction: You are asked to take part in a research study regarding consumers' perception of a rather new marketing technique in the context of high involvement products. This marketing technique is called Augmented Reality Marketing (ARM).

Purpose of this Study: We will conduct a qualitative study with the purpose to increase the theoretical understanding of how consumers perceive ARM in the context of High Involvement Products (HIPs). Consequently, we aspire to provide valuable insight for practitioners within the marketing field by exploring the perceived usefulness of ARM.

Study Procedure: The study will be conducted via a contextual interview, divided into three parts. First, an interview: in which we will ask you questions about HIP and ARM. Thereafter, observation: here you will get the opportunity to try four different ARM-platforms while we observe your reactions. Finally, interview: in which questions will be asked about your overall perception of ARM. In total, the session will take approximately 45-60 minutes.

Voluntary Participation: Your participation in this study is voluntary. Even after you sign this consent form you are free to withdraw your consent within 14 days without giving a reason.

Consent to take part in research

I _____ voluntarily agree to participate in this research. Further, I confirm that I have had the purpose of this research explained to me and I have been given the opportunity to ask questions about the study I am about to take part in.

I understand that despite agreeing to participate now, I am entitled to withdraw at any time or refuse to answer any question without consequences.

I understand that I can withdraw permission to use data from my interview within 14 days after the interview. If so, the material collected from me will be deleted.

I understand that participation involves a semi-structured interview in which I am asked to share my perception about ARM in the context of HIP. Further, I understand that participation involves being observed while downloading and interacting with a mobile ARM application.

I understand that extracts from my interview may be quoted in this research and in published papers.

I understand that I will not benefit from participating in this research in the form of monetary value.

I agree to my interview being audio-recorded.

I understand that all information I provide for this study will be treated confidentially and that in any report on the results of this research my identity will remain anonymous.

I understand that this signed consent form and original audio recording will be stored by the researchers until the exam board confirms the results of this research. If required, the transcript of my interview, excluding my identity, can be revised by the examination board.

I understand that under freedom of information legalization I am entitled to access the information I have provided at any time while it is stored as described above.

I understand that I am free to contact any of the researchers to seek further clarification and information.

By signing this form, I confirm that I have decided to take part in this research and consent to JIBS treating my personal data in accordance with current data protection legislation and the data delivered.

Signature of research participant

Place and Date:

Signature of researchers

Elin Hultin

Eveline Eskengren

Under the General Data Protection Regulations (GDPR), you obtain the following rights over your personal data:

- **The right to be informed.** You must be informed if your personal data is being used.
- **The right of access.** You can ask for a copy of your data by making a ‘subject access request’.
- **The right to rectification.** You can ask for your data that we hold about you to be corrected if it is inaccurate or incomplete.
- **The right to erasure** (‘right to be forgotten’). You can ask for your data to be erased from our records without any delay in time.
- **The right to restrict processing.** You can limit the processing and use of your personal data if you are concerned about the accuracy or usage of your data.
- **The right to data portability.** You have the right to get your personal data in a structured and machine-readable manner. You also have the right to ask a party that holds your data to transfer the data to another organization in a secure way.
- **The right to object.** You have the right to object to specific types of processing of your personal data if you are concerned about processing of your data related to your individual situation. You have an absolute right to object to an organization using your data for direct marketing.
- **Rights in relation to automated decision making and profiling.** You have the right not to be subject to a decision that is based solely on automated processing, including profiling, if the decision affects your legal rights or affects you in a similar matter.

You should also know that you may contact the data protection officer if you are unhappy about the way your data or your participation in this study are being treated at dataprotection@ju.se

Thank you for reading this information sheet and for considering whether to take part in this research study.

If you should have any further questions, please feel free to contact us.

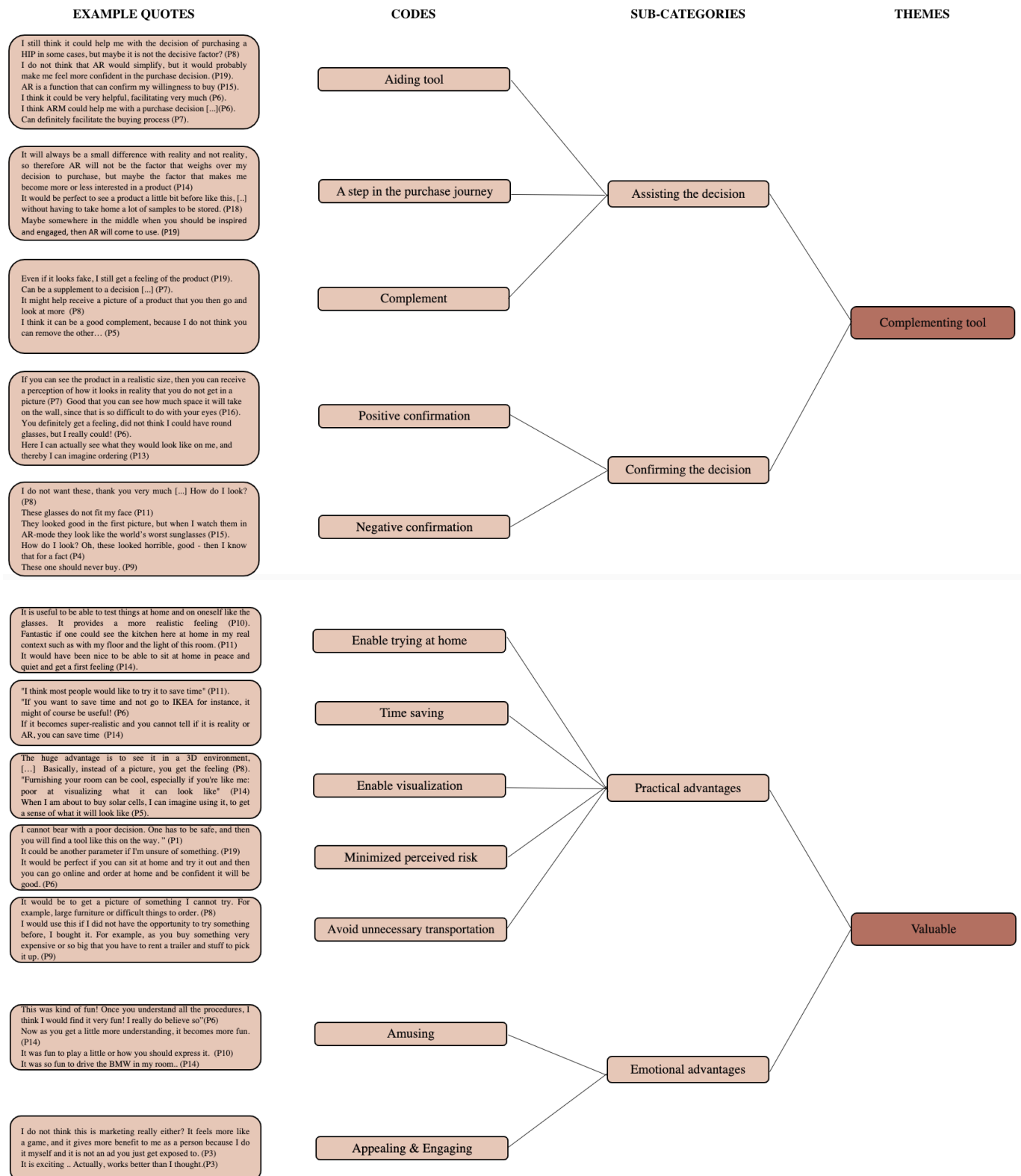
Elin Hultin

E-mail: huel1796@student.ju.se

Eveline Eskengren,

E-mail: esev17xx@student.ju.se

Appendix E – Coding Tree



For me that is not that technical, this was time-consuming [...] (P7) It seemed a bit time-consuming (P11). If you need to download something that is a big restraint [...] (P19) One does not have the strength to return to test an app, so it becomes a bit inflexible in that way (P10).

If it is too complicated and technical advanced... (P11) I think it is too hard, and I am not bad with technology [...] (P2) It might be a challenge to get insecure and nontechnical people to try it (P3). [...] companies need to make it easily accessible and not too complicated (P6). A helping guide would have facilitated the process a lot (P14).

One must know that it exists for starters. This companies must inform about (P5) My biggest problem is to know that it exists and where it exists... I do not have social media (P18) It is a challenge to find it and know about it (P12)

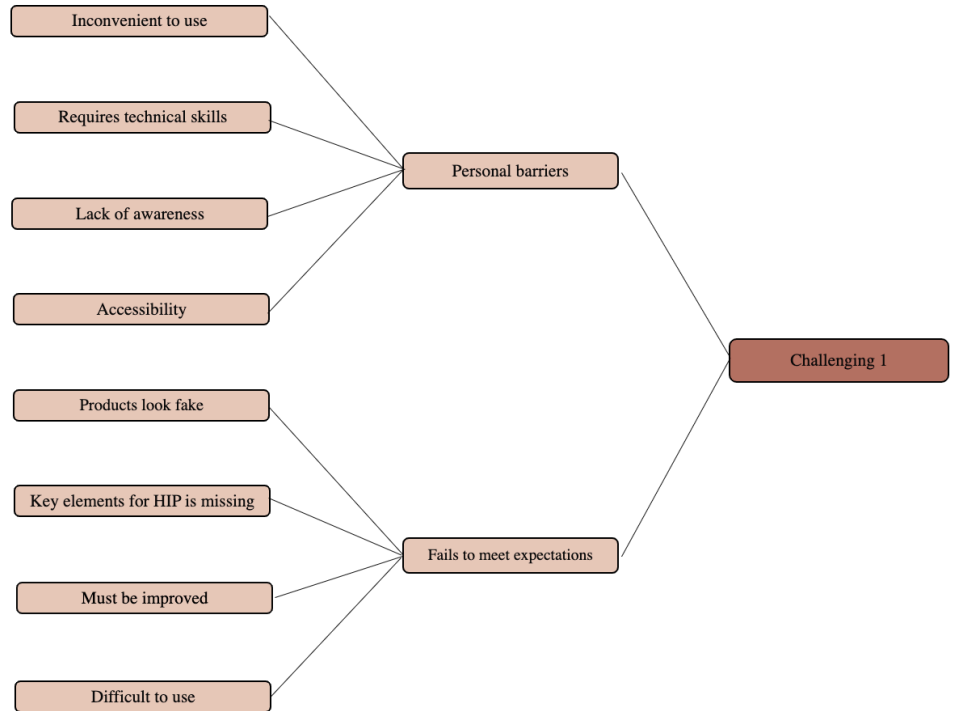
I think I would rather go to the store and feel and squeeze in reality if I live near (P5). I would not actively search for it, but if it was there right in front of me, I would definitely use it (P19). The challenge is to make the customer see the added value, and also easily find it (P15). A challenge is to make people find the app (P8)

It still does not look like in reality, looks fake (P5) Looks very fake. Plastic. Hard to navigate (P13) Despite how fake it looks; they should assist more [...] (P13) They must have better control over where the products are placed to make it more realistic. (P14). ... the products cannot look so animated (P20).

For example, the sound of my guitar or how comfortable a couch is. Those elements might be more important for HIP than the design (P14) I want to feel the speed, space, acceleration, size and comfort. Also, some numbers should have been included, hard to see with the eye (P11). One want to experience the size of a car and hear it sound, and that one must do live (P7)

I missed the ability to compare between several alternatives. It was very troublesome... (P15) If the technique is good enough, I think one has great use of it. But today, they were too messy and hard. They need to be improved (P13). Today I think they are too bad to give enough value (P16).

It was hard to navigate (P13). It might just be me that do not get it, but it was very hard to understand and use (P11). I think it is too complicated. I am not bad with technology, but I still did not manage [...] (P2).



If the technology is not good enough to add value, I think it could have the opposite effect (P20) It is almost better to remove the function than having it if the impression is so bad. Then I lose my interest (P15) Does not give any added value if I do not understand the app, I rather get frustrated (P19) If I get disappointed, it diminish my experience instead (P1)

I think that is what destroys my confidence the most, how big it actually is (P1). Quite B honestly, positive aspects exist, and I thought it was fun, but I think I saw too many flaws to not question why these apps have been launched (P20) It rather lower than increases the idea of BMW (P19)

I am disappointed that one cannot try all products (P15) Haha it was absolutely not as good as it first seemed (P3) One could open the door but not enter it? (P16) It just looks like a computer-generated image, exactly like ten years ago. (P19) It was not worth all the work. I wanted to see both the size, color, yes everything in the app. Also, it took much time (P14)

Oh my god... I will not buy these! (P10) I did not make it work, so I just felt stupid when I went around in the room and did not exactly become excited about shopping (P2) Usually, I would just have purchased it to try it at home, but now I skip to purchase it because it did not look good (P15).

The experience was that it was very difficult, and I felt stupid (P5) I think it might be too hard for me, I am not so technical (P11) Oh I do not know... I think I am the wrong person to use this! (P7) I look horrible. Very sad to see oneself like this, I am so old? (P5) Am I just stupid? (P6).

Is the couch really this big? Can that really be true? (P2) It this real size? (P16) Ahee, is this really the real size? (P17) I would not trust today's AR apps with colors and sizes etc (P8) It gives the wrong proportions (P15)

Does it need to access my camera? (P7) I want to protect myself from everything, therefore I denied (P6). But for a skeptical guy like me it makes me worried about what type of data they actually collect on me (P19). [...] Especially if the app has a lot of weird terms of use, then one gets tired (P15).

