

Saimaa University of Applied Sciences  
Faculty of Business Administration  
Degree Program in International Business

Mariia Konopelko

**Augmented reality packaging in Food & Beverages industry**

Thesis 2019

## **Abstract**

Mariia Konopelko

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appendices

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The purpose of the study was to describe and analyse the concept of augmented reality packaging and to justify that it is an effective marketing communication tool that can be used to increase the attractiveness of the product in food and beverage industry.

The secondary data for this study was gathered mainly from online articles, academic literature and case studies. The primary data was collected from an online survey with the focus groups in Finnish and Russian markets and an expert interview. Both researches were conducted by the author.

The final results of the study showed that augmented reality can be used as a marketing communication tool to increase the attractiveness of the product in food and beverage industry.

Keywords: marketing communication, digital marketing, packaging, augmented reality

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# 1 Introduction

## 1.1 Background

Nowadays the world is changing, developing and evolving with a great speed. The world's digitalization trend is penetrating in most of the areas of humans' life. Smartphone with the internet access is roughly the only device needed to perform any online activities: communication in social media, shopping, business communication, education and many others.

This trend brings up many changes in humans' consumer behaviour. Online shopping is getting more and more popular whether it is fashion, technology or even food shopping. To stay successful in the market, companies today must adjust their production operations, marketing operations, sales operations and consumer communication to the modern realities quickly. There are many existing cases showing how those companies who realized the potential of the digitalization succeeded in the competition against those ones, who were on the leading stages, but failed to adjust to new technologies.

Virtual reality (VR), augmented reality (AR) and 3D technologies are not the new things on the market, but not yet widely used in business. However, there are successful cases of using these technologies. Although currently the more widely used technologies in business out of mentioned ones are the 3D and 360 visualization technologies, augmented reality as well as virtual reality are actively gaining their positions in the modern market and are expected to grow highly. At the end of 2017 the augmented and virtual reality industry was valued as 14.1 billion US dollars. (Statista 2019) *"The augmented reality market was valued at USD 11.14 Billion in 2018 and is expected to reach USD 60.55 Billion by 2023, growing at a CAGR of 40.29% during the forecast period"* (Business Wire 2018). This number even doubles the virtual reality market numbers. Concerning the current and predicted market growth rate, it is obvious that AR market has a great potential, which makes it a great topic with enormous amount of aspects to be studied and discussed for the better use of its potential.

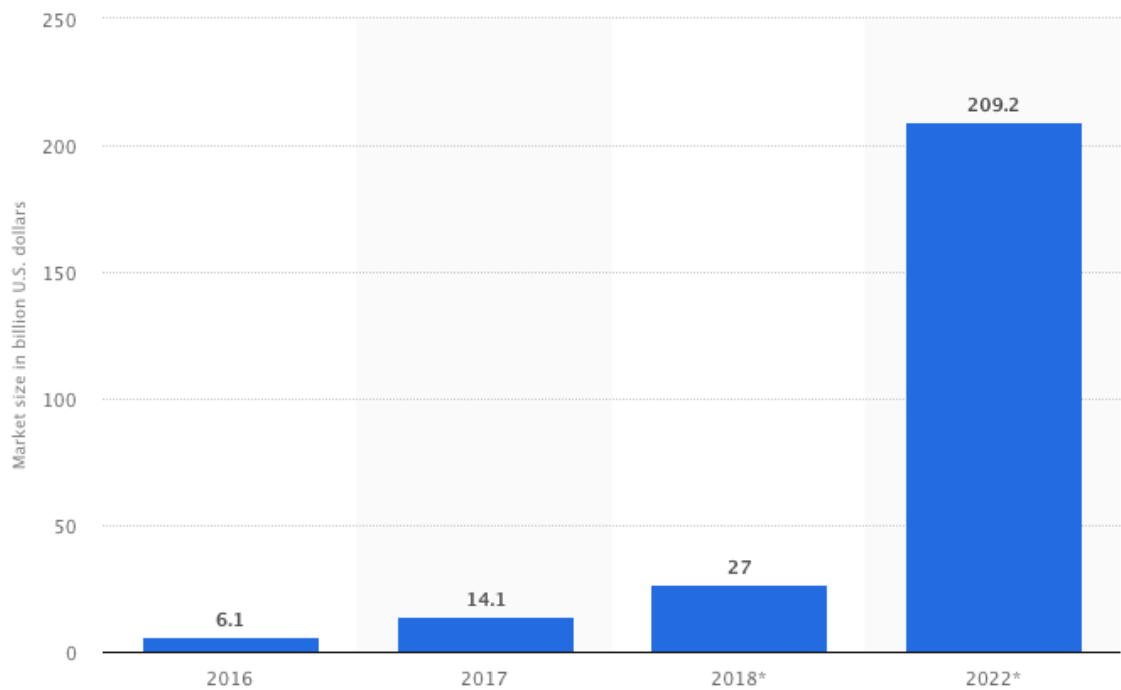


Figure 1 Forecast AR and VR market size 2016-2022 (Statista 2019).

It is not so complicated to understand what technology is based on its name. The world augmented can be defined as “adding or enhancing” something. Augmented reality is *“an enhanced version of reality where live direct or indirect views of physical real-world environments are augmented with superimposed computer-generated images over a user’s view of the real-world, thus enhancing one’s current perception of reality”* (Reality 2019).

If for virtual reality accessories, such as virtual reality glasses, are the necessary tools otherwise it will not work, for augmented reality no special equipment is needed. The only integral accessory is the smartphone. Based on the statistics, the expected number of smartphone users worldwide in 2020 will be 2.87 billion (Statista 2019). These numbers perfectly identify how big the potential market is.

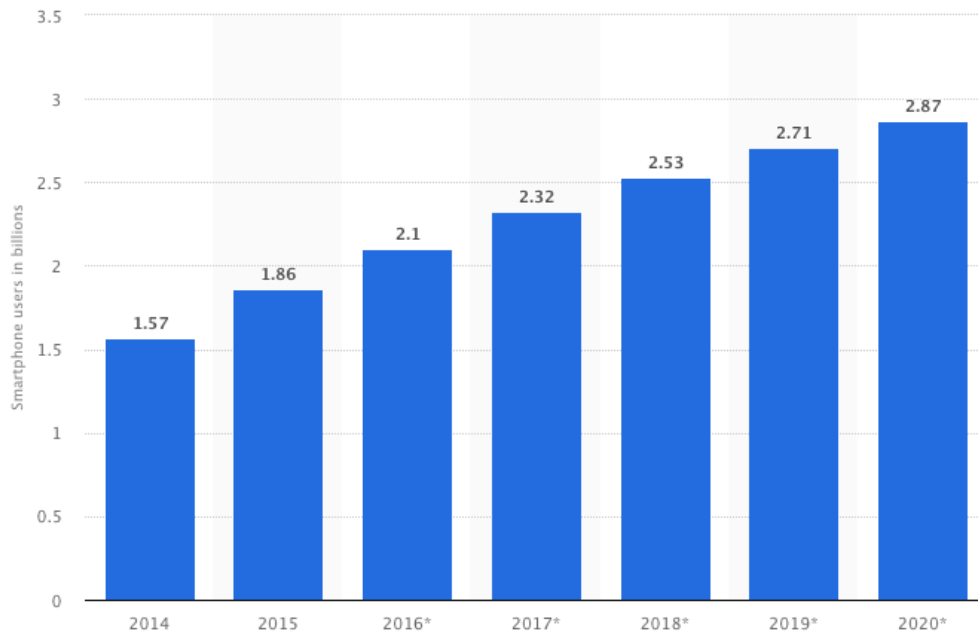


Figure 2 Number of smartphone users worldwide from 2014 to 2020 (in billions) (Statista 2019).

Today there are already plenty of cases in various companies in various industries using augmented reality as a marketing tool to add the value to the product. Among those case companies, using AR technologies, are such companies as Coca-Cola, Absolut, McDonald's, Milka and many others. AR has become widely used among the brands in F&B industry. This thesis will emphasize on the use of augmented reality packaging technologies as a marketing tool in food and beverage industry. The research will be focused on how AR can add value to the brand and improve the communication processes with the customer. There is no exact way to use the AR packaging in anything, as this technology is extremely flexible and the content is varied based on the needs of the company that should be fulfilled. For instance, the product that is targeted for children can use entertainment contents in their AR packaging like games, whereas some other products like furniture can use the AR packaging to demonstrate the instructions on how to assemble it right. The flexibility of AR packaging is a great benefit as it can work properly for the exact target audience. Although AR packaging can be used in any industry with any kind of product, this research will look mostly on the food and beverage industry and how AR packaging works there.

## **1.2 Purposes of the study**

There are several purposes for the following research to be implemented. The primary object can be described as:

- To analyze and evaluate whether augmented reality packaging technologies work as a marketing tool to increase the attention towards the product in food and beverages industry companies.
- To analyze and justify that augmented reality packaging helps companies to develop a successful channel for communication with customers.

Together with the main purposes there are several other objectives such as:

- To study the importance of the packaging itself for the product
- To study and evaluate existing cases of AR packaging in F&B industry

Another purpose that works as a stimulus for the author to implement the following research is the intention to enhance further studies on the topic of augmented reality and sharply outline subsequent steps.

## **1.3 Delimitations of the study**

There are a couple of existing delimitations for the following thesis that should be kept in mind. First, the thesis is implemented in the field of marketing and the topic emphasizes mostly customer relationship management and building marketing communication with the customer in regard with building and developing the brand itself.

The following research will be conducted within the framework of Food & Beverage industry with the results being linked to the peculiar properties of this industry. Currently there are already plenty of cases of augmented reality packaging in Food & Beverage industry, which makes it potentially one of the most appealing industry to study the topic.



It should be considered that the topic of Augmented Reality has not yet been widely studied, therefore there is little information available. As evaluation of the effectiveness of the marketing tool requires a lot of further studies and researches to be done and cannot be implemented in the following study, no discussions on effectiveness of the tool will be included. The author of the thesis perceives it as the base for the development of further studies of the topic that go beyond the scope of this thesis. The competence of this thesis study is just to identify and justify whether augmented reality packaging increases the attractiveness of the product.

#### **1.4 Limitations of study**

The following study has several limitations. First, one should keep in mind that AR packaging tool is highly individual. Every product and every brand uses it to fulfill specific individual needs of the marketing strategy being implemented. Therefore, there is no limit on the content of the packaging, which leads to an infinite number of possible variations of it. Second, today there is a lack of academic studies and academic literature related to the topic of AR packaging.

Considering the conditions stated above the research at this stage is limited to only identifying the attractiveness of the tool and not considering its effectiveness or any other effect.

#### **1.5 Research questions**

There are two main research questions that are to be answered in this study.

Research question 1: Does AR packaging work as a tool to increase attraction towards the product?

Research question 2: Does AR packaging as a marketing tool help to develop communication with the customer?

## 1.6 Research design

After the precise study of the methodological approaches and research studies it was defined that the research to be prepared will be designed and implemented as the exploratory study with some elements of the descriptive study approach.

*“The three main ways to conduct the exploratory research are:*

- *a search of the literature*
- *interviewing ‘experts’ in the subject*
- *conducting focus group interviews “.*

(Saunders & Lewis & Thornhill 2009.)

The following research includes all the mentioned ways to implement the research. The main to answer the stated research questions and justify the hypothesis are the focus group interviews in terms of surveys.

Based on the evaluation of conditions and the nature of research questions it was as well decided that the survey is the best appropriate research strategy to implement. The study will also include some superficial elements of the case study research strategy with multiple cases of AR packaging being evaluated.

(Saunders et al. 2009.)

As the literature review this thesis is implemented in the theoretical part, the research part is to be the empirical research divided into two separate approaches. The objective of the empirical part is to justify the hypothesis and answer the research questions, the first one being the survey of focus group and the second being an interview with an expert. Both researches are the qualitative types as the study emphasizes on the emotional characteristics such as feelings and attitudes towards the object of study. (Saunders et al. 2009.)

From the prospective of the time horizons the study is supposed to be the cross-sectional study. This term means that the particular phenomenon is studied at a particular time. Usually, cross-sectional studies employ the survey strategy, which will be employed in this thesis study. (Saunders et al. 2009.)

The author seeks to get valid and reliable results from the research and therefore considers the possible misleads and possible false assumptions. To reduce this consequences author pays a lot of attention to identifying the focus group the most appropriate way and to design the survey and questions to be asked to achieve the most reliable and accurate results. (Saunders et al. 2009.)

### **1.6.1 Literature review**

The literature review (in the case of this study as was mentioned above) is implemented in the theoretical part of the thesis. It consists of the deep study of several marketing concepts mentioned in this topic. Most of those concepts are closely related to the relationship between the brand and the customer. Those are user experience, decision-making process, consumer buying behaviour and many others. This section also includes the insight into the concepts of digital marketing and augmented reality technology itself.

### **1.6.2 Focus group interviews**

The focus group interviews are implemented in terms of the self-administered surveys. The survey will be conducted in form of online questionnaire. (Appendix 1). To eliminate most of the inaccuracies, close attention should be brought to the process of identifying the population and sampling frame. Target group of this research is identified as students mostly aged 20 to 30. Geographically the research covers two markets: students in Saint Petersburg, Russia and students in Lappeenranta, Finland. The questionnaire was tested before the release within the group of five people to make sure the questions are appropriate and reveal the needed information. A simple random sampling method is used in this survey (Proctor 2005).

### **1.6.3 Interview with an expert**

The second part of the empirical research is the face-to-face interview with an expert. The expert, Andrei Volkov, is a cofounder and strategic director of the Russian startup company Junk Reality. Junk Reality specializes in implementation of various visualization technologies such as virtual reality, augmented reality, 3D/360 and architectural visualization. Although the company is a startup, it has already gained the leading position on the market and gathered an imposing portfolio. (Junk Reality 2019.)

### **1.7 Review of the sources**

Plenty of various sources were used to write this thesis. They imply academic literature on different disciplines, such as marketing with emphasis on the consumer related issues, digital marketing and research methods. The author used the latest versions of the academic literature, however, since the topic is quite new, there are no proper updated books on such topics as augmented reality. Therefore, the most relevant and updated information was gathered online.

Online sources will cover the biggest part of all the sources used in the study. They cover marketing discipline, and most importantly the information on Augmented reality. Among online sources related mostly to marketing there are articles published in business magazines. In case of information on Augmented Reality various articles are used. In addition to that there is a trend among many companies to publish informative blogs on different topics related to the industry of the company. Companies in digital industry are more than others involved in this trend and publish articles with relevant and updated information about technologies and current trends related to their industry.

The above mentioned are the secondary sources that are used in this study. Together with them there is a main primary source of information, which is the result of empirical research.

## 1.8 Structure of the thesis

The thesis introduction covers the background of the topic as well as practical issues like limitations, delimitations of the study, purposes and research methods. The second part is the theoretical part with an insight of the packaging as the marketing tool, augmented reality technologies and augmented reality packaging technologies. The cases of AR packaging are shown in this part. The third part of the thesis consists of the research part itself including the interviews with potential customers and an expert and the results. The fourth part represents the results and conclusions.

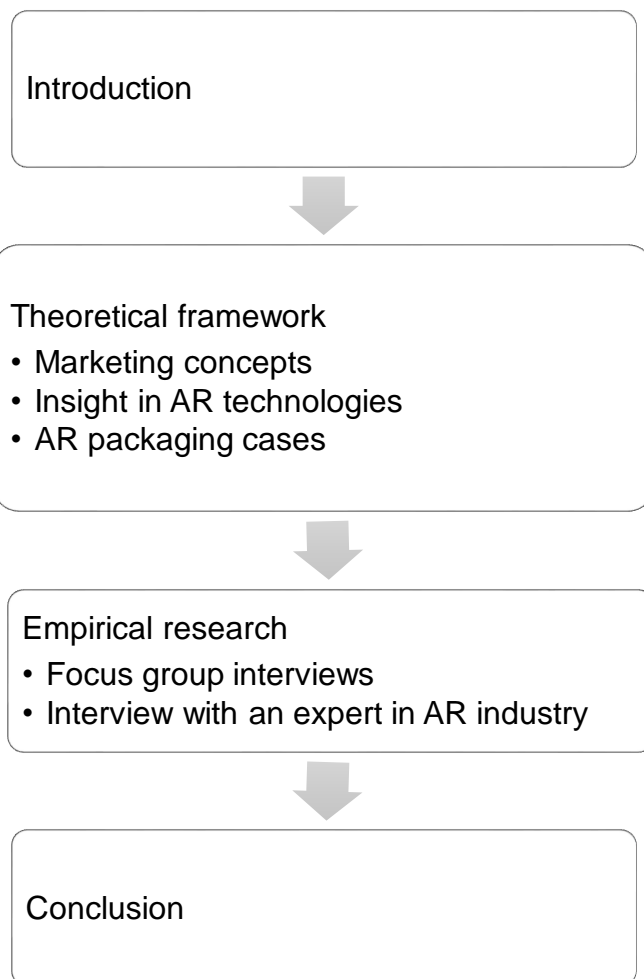


Figure 3 Structure of the thesis.

## **2 Theoretical part**

This chapter covers the theoretical concepts that are crucial for the thesis. As the topic of the thesis is augmented reality packaging, two important topics should be studied. They are the packaging itself and its role in influencing customers to make the buying decision. Therefore, the first part of this chapter covers the essentials of marketing discipline with emphasis on the customer relations. It is followed with the study of the packaging as a marketing tool and its role in communication with the customer. Finally, this chapter covers some information on the augmented reality technologies and the cases of AR packaging. The evaluation of those cases is the part of the study based on the literature review.

### **2.1 Marketing concepts**

Packaging is one of the crucial tools of marketing communication. Therefore, there is no doubt companies nowadays pay such a great attention to package designing. Since packaging is a tool of marketing communication, several marketing concepts related to marketing communication, customers' relationship and consumers' decision making process should be studied.

#### **2.1.1 Marketing communication**

*“Marketing communication refers to the means adopted by the companies to convey messages about the products and the brands they sell, either directly or indirectly to the customers with the intention to persuade them to purchase.”*

(Business Jargons 2019.) To describe it the easy way, it is a complex of all marketing activities done by the companies to communicate with their customers. (Fill & Jamieson 2006.) This chapter covers the concept of marketing communication from the very beginning as packaging; in this case, augmented reality packaging is considered as a mean of communication with the customer. The main idea to be explained is that with the change of the world, communication methods have changed and are still changing. This obviously refers to marketing communications as well. The, if can be called so, “revolution” in marketing

communications started with the appearances and the huge spread of social media, which became a completely new and extremely successful channel for any kind of communications. Marketers are using social media to build the dialogue with the customer both ways (from the brand to the customer and backwards). Though the time has passed since this revolutionary change in the way of communication and social media is currently probably the main and the biggest channel for it. Hence, it also develops with a regard on the technological changes in the world. (Smith & Zook 2016.)

Today, the most popular tool of augmented reality in social media is filter. Filters are now widely used in nearly all the social media platforms. The first wave of popularity of filters started with the Snapchat platform, then it expanded on the leading social media platforms like Instagram and Facebook. (Bullock 2018.) All those platforms have enormous audience of users. In December 2018, Facebook updated statistics showcase the numbers of 2.32 billion monthly active users (Facebook newsroom 2019). In 2018, the main photo sharing platform Instagram has reached the number of one billion active users and the numbers continue to grow rapidly (Statista 2019). All those leading media companies now are greatly focused on development of the virtual and augmented reality technologies.

With all those trends evolving and expanding throughout the world like digitalization and digital transformation the focus of customers switches from offline to online. Therefore, the supporting processes like marketing communications are as well moving forward to the online world and adopt the new trends of the modern online world. Augmented reality is exactly the right trend to focus on, as the shift for the world is to be visual and virtual oriented, where AR can fulfil the needs of visualization and virtualization. (Smith & Zook 2016.)

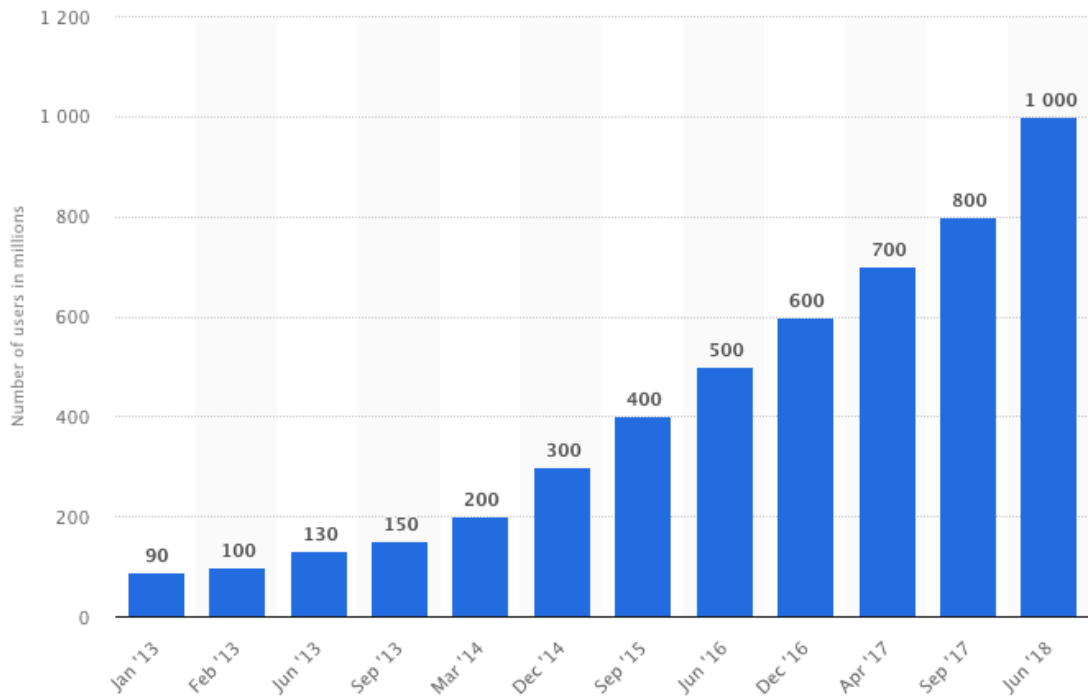


Figure 4 Number of monthly active Instagram users from January 2013 to June 2018 (in millions) (Statista 2019).

### 2.1.2 Digitalization and digital marketing trends

*“Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business” (Gartner IT glossary 2019).*

*“Digital business transformation is the process of exploiting digital technologies and supporting capabilities to create a robust new digital business model” (Gartner IT glossary 2019).*

The trend of digitalization and digital transformation has an influence on nearly all the aspects of the life and lifestyle of humans all around the world. Hence, it has a straight impact on the way business must be held and the way marketing activities must be developed and performed. *“Digital marketing is the marketing of products or services using digital channels to reach consumers” (Financial times lexicon 2019.)*



What consumers are looking for currently is a totally different level of engagement with the product. The engagement with the brand, with the company, with the product is a crucial point of consideration for the modern customer. Augmented reality as a digital marketing tool is something that can give much more immersive experience for the customer, mostly in terms of advertising. As most of the commerce goes online, one of the most popular features of augmented reality among consumers is the visualization of the products, which makes purchasing experience much easier and less obscure. (Charlesworth 2018.)

Some of the benefits that AR brings in terms of digital marketing can be highlighted as following:

- Increased brand awareness

This occurs with the help of the so called “wow” effect that AR creates. In addition to that, the fact that augmented reality is a relatively new technology, the use of it evokes relatively new interaction experience which leads to the increased brand awareness.

- Increased customer engagement

Those digital technologies like VR and AR have quite different engagement level, rather than others, due to its immersive nature. *“Marketing campaigns which utilize AR have an average dwell time of 75 seconds. To put this in perspective, traditional radio and TV ads have a dwell time of just 2.5 seconds.”* (India 2016.)

- Improved customer experience

Due to the flexibility of the AR (packaging in the case of this study) content, there is a possibility to improve the customer experience by fulfilling the exact needs and expectations.

- Bringing digital to the real world

One more unique benefit of augmented reality is its ability to bring together both the reality and the digital representation. This opens an opportunity to use traditional communication channels, although with possibility to bring it to digital anytime just using AR.

(India 2016.)

It has been predicted, that even the traditional advertising tools can be changed with the technologies being AR and VR. People nowadays are tired of advertisements that follow them everywhere and appear on most of the web pages online. The advertisement experience is also changed with the use of augmented and virtual reality. (Bershtein 2018.)

### **2.1.3 Consumer decision making process**

The concept of decision making process should be studied and covered for this research as the discussion is about the packaging, which is one of the final tools that can affect the decision to make a purchase. The decision-making process as well as the buying behaviour is an extremely complex concept. To understand the behaviour of one person or either a group of people combined based on various characteristics requires a huge study of sociographic and psychographic indicators. (Kotler & Armstrong 2017.)

There is a great number of factors that influence the decision making. Those can be age, demographic differences, cognitive biases, which include the thinking composition based on observations, beliefs etc., past experiences. (Dietrich 2010) The question for the author of the thesis in terms of decision making process is to be described as: can augmented reality packaging affect the decision-making process, and if yes, how and on what stage of the process.

Considering the traditional model of buyer decision process (Figure 5), it can be allocated that the products are to be chosen on the evaluation of alternatives stage. However, there is an information search stage, which is the preceding

stage that derives the need for information. Augmented reality packaging is the trigger that makes the product to outstand either with extended information, which is needed in decision-making, or with other benefits, which attend the customer. To express it easier, with the technological progress customers have more opportunities to study the market for the products in compliance with their needs and wants. Augmented reality packaging in this scenario gives the companies the capability to present and outstand their products and fulfill more needs and wants. Companies can have a bigger focus on the customers. (Edelman & Singer 2015.)

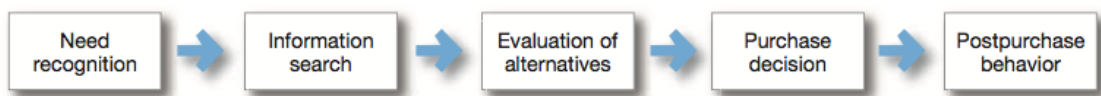


Figure 5 Traditional model of buyer decision process (Kotler & Armstrong 2017).

### 2.1.4 User experience

With the technological shift appeared the shift in the demand of a developed different kind of user experience. Some of the changes or trends on customers' experience are to be described in this chapter.

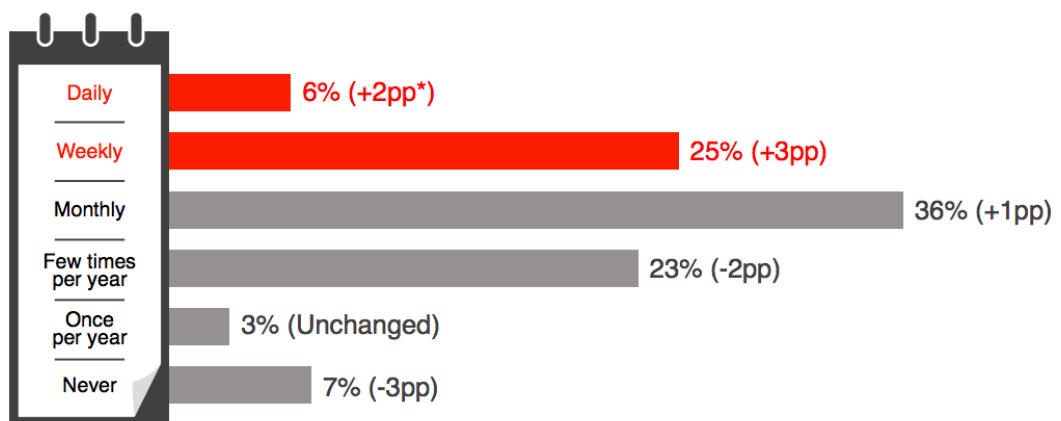


Figure 6 Percentage of consumers buying products online (PWC 2019).

Online shopping is the biggest change in user experience with mobile phones (smartphones), rather than PCs being the most frequently used devices. The

percentage of people buying products online is increasing and percentage of those who never buy online is decreasing at the same time. The companies that understood the needs of the customers for online shopping are developing easy useful apps like Amazon, Asos and many others, which create a pleasant user shopping experience that stimulates the customer to continue shopping online. (PWC 2019.)

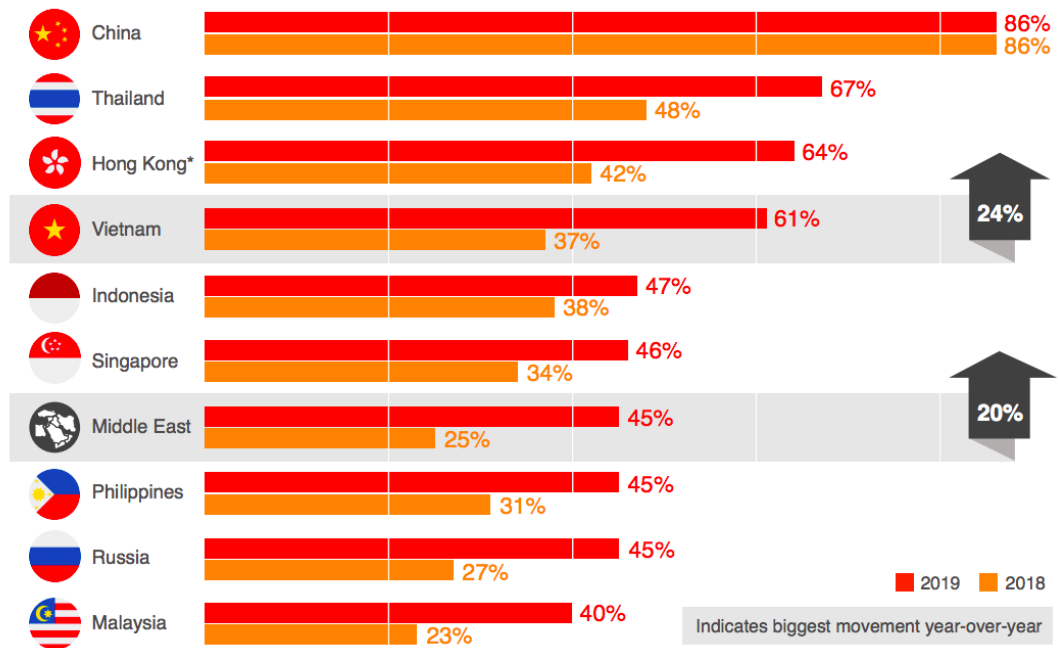


Figure 7 Percentage of customers using mobile payment in stores (PWC 2019).

Another popular and developing trend that has a straight impact on the changes of user experience are the mobile payments that are gaining popularity around the world with a great speed. In the figure 7 we can see the percentage changes of the users using mobile payment systems in the region of South-East Asia reaching 24% growth in Vietnam during one year (PWC 2019).

One more trend that can be allocated is the cooperation of physical and digital approaches. Although the digitalization process is happening very quickly, there is still a need in physical approach and physical presence. However, the well managed and well prepared blend of both those approaches creates a complex, successful and satisfactory user experience that lately affects the sales. (PWC 2019.)

Augmented reality works greatly as a tool to maintain a satisfactory user experience. The Magnum case was brought up in Singapore in 2017-2018. The idea of the campaign was to use augmented reality technologies to let people customize their very own Magnum ice cream. The case was a totally new experience both for the company and the customers and boosted the sales as personalization is as well the growing trend in the world and customers appreciate it greatly. (Blippar 2018 a.)

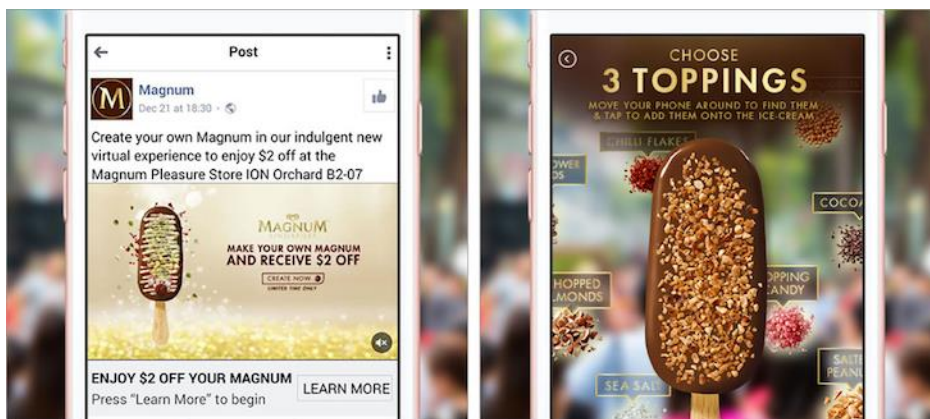


Figure 8 Magnum AR customization case (Blippar 2018 a).

### 2.1.5 Importance of packaging

The importance of packaging cannot be ignored. It is the last tool that can affect the purchasing decision in the decision-making process. Well-designed packaging can create and increase brand's competitive advantage by *“adding value, improving the product (e.g. improving the freshness or making it easier to pour, etc.), developing stronger shelf presence, positioning a brand in a particular way, and creating or strengthening the brand's relationship with the buyer. The pack should be what top designer Michael Peters calls ‘a visual magnet’ that entices the customer to purchase and, eventually, become loyal to a particular brand”* (Smith & Zook 2016).

The statement of packaging being a “silent salesperson” describes even better the importance of such tool. The design of the package can have either positive impact on the customer and stimulate the purchasing of the product or the

negative impact, where the bad design of the packaging can lead the customer to the decision to emphasize its attention on another product. (Smith & Zook 2016.)

According to the studies, there are three main functions of the packaging:

- Contain and protect

The packaging should contain and protect the product during the processes of storage, transportation and in some cases in the processes of usage.

- Offer convenience

This function represents the packaging being important in the usage phase, where the user experience can be influenced with how convenient the packaging is.

- Communicate

Packaging being the tool for communication is the focus of this whole study. The packaging of the product grabs the attention of the potential customer, communicates to the customer the message to make a purchase, communicates to the customer the brand values and links with the customer, gives the instructions on the most appropriate and most beneficial ways to use the product and of course translates the warnings on how not to use the product. All those features that packaging communicates to the customer are the tools to make the user experience the most satisfactory out of possible and therefore to enhance the brand awareness, brand loyalty, repeated purchases and other possible positive outcomes that lead to better financial performance of the company. (Smith & Zook 2016.)

## **2.2 Insight in AR technologies**

To better understand how augmented reality can be used, there should be an understanding how the technology works. This chapter will not look at the technical approaches and explanations of the hardware and software needed to create the augmented reality, however, it will come up with an insight into the working principle of already created augmented reality.

Augmented reality is the overlay of the digital visuals onto the real world displayed through the camera so that it looks like they are in one reality. There are two approaches to implement it, marker based or, as it is also sometimes called, recognition based, and location based approach. The marker based type evokes the augmented reality, when the computer vision of the smartphone catches the exact marker, that was linked to the program. The marker can be any kind of an object displayed. One of the well-known 2D markers is the QR code, which can be scanned to open access to something. However, AR marker can go beyond and can be a colorful 3D object, or an animated display on something. The location based type of augmented requires inbuilt GPS software that recognizes the location, that was recorded and therefore evokes augmented reality in the place where it is needed. (Kumar 2017.)

## **2.3 AR packaging cases**

To better understand the existing situation and how augmented reality packaging really works and increases the attractiveness, existing cases should be reviewed. This study reviews several examples of AR packaging cases prepared by the Blippar company. Blippar are the pioneers of augmented reality technologies. The company has more than seven years of experience and more 18 000 AR apps and campaigns prepared during that time. (Blippar 2019 a.) Obviously, those cases described below are not the only ones existing. There are as well plenty of other companies implementing the AR packaging technologies in various industries. However, the author allocated some of the most interesting and effective ones as there is no possibility to describe all the existing cases.

### 2.3.1 Nesquik

One of the projects done by the Blippar company was the AR packaging for Nesquik cereals with an emphasis on the children being the target audience for this product. The main goal of this campaign was to increase the brand engagement and therefore reach the repeated purchases by creating both the entertaining content, which will be best loved by children, and educational content, which will be supported by parents. Blippar together with Nesquik worked “to transform ordinary kitchens into a deep-sea heaven” (Blippar 2019 b). All in all, this case was a creation of an interactive breakfast experience. By implementing it, Nesquik reached the goal of 20% increase in repeated purchases. (Blippar 2019 b.)

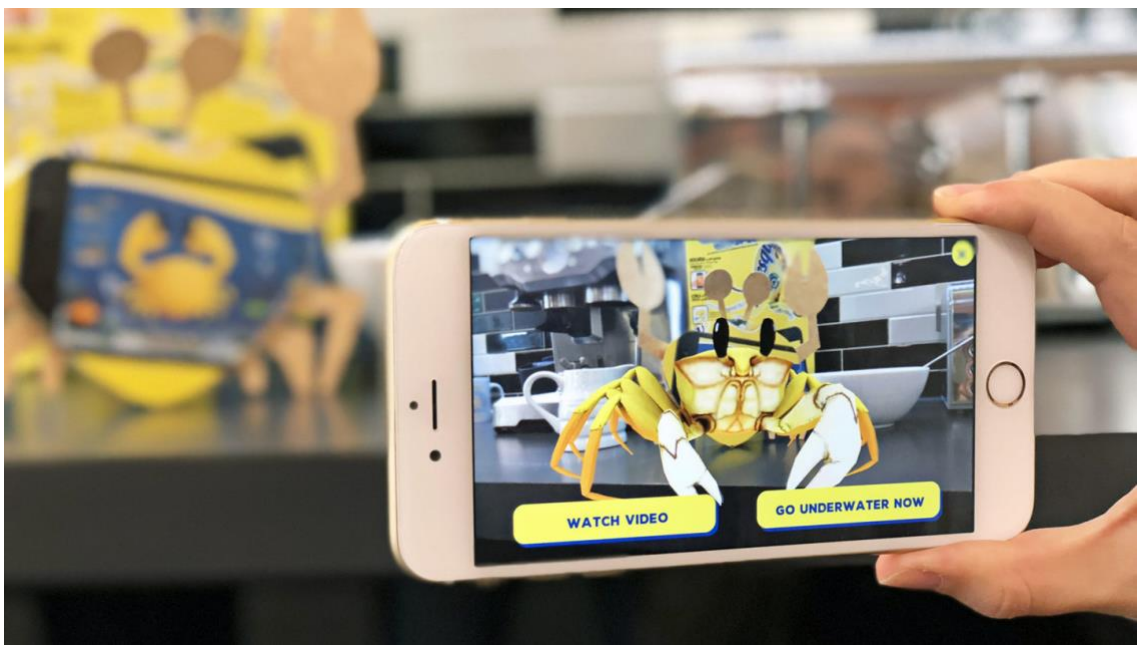


Figure 9 Nesquik AR packaging (Blippar 2019 b).

### 2.3.2 Kellogg's

The Kellogg's case also covers target audience of children and creates, as well as Nesquik, an interactive breakfast experience. Although it also uses AR packaging on the cereal box, the main goal is different in this case. To describe briefly, the idea is to help children get back to school prepared, by learning while



playing various mini games and quizzes, that check and enhance their skill. The box of the cereal with the use of AR and a smartphone transforms into an interactive jungle map, which is filled with mini games. The campaign was launched exactly during the summer break 2018 in seven European countries in seven different languages. In the description of this case there was no exactly stated business goal, although it can be most probably identified as “to increase the brand awareness and involvement”. This type of the content is accepted by both children and their parents and therefore is targeted to both. As it was stated earlier, the main target is children audience as they are the main users of this AR experience, however the fact that the content is as well educational is pleasing to the parents, willing for their kids to be better prepared for school and using the entertainment method to educate them on some basic knowledge. (Hills-Duty 2018.)

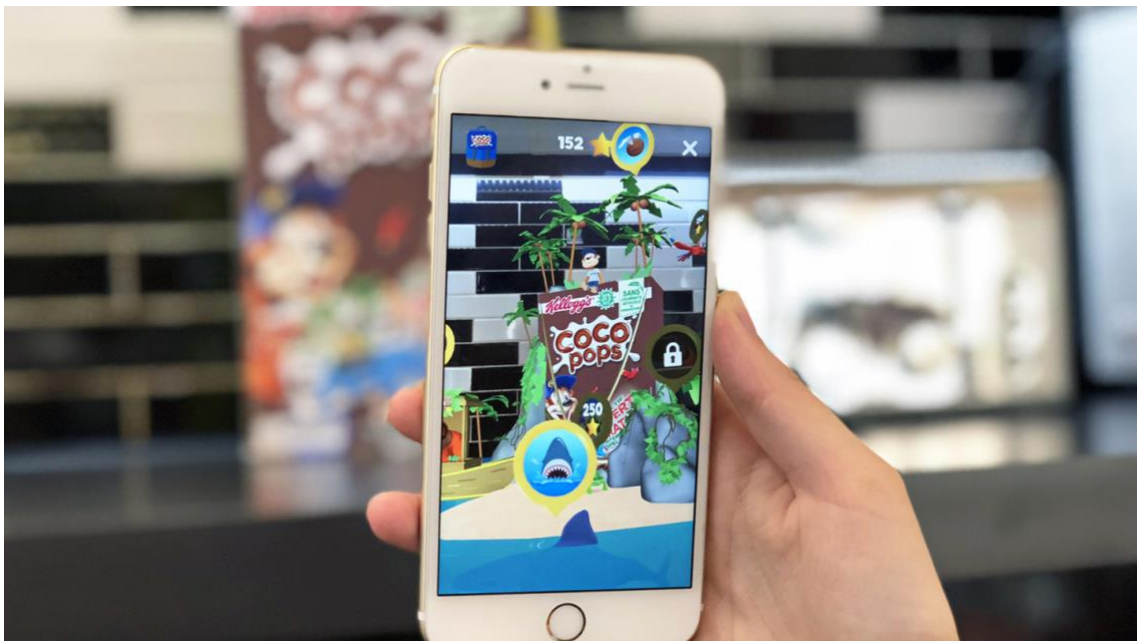


Figure 10 Kellogg's AR packaging (Blippar 2019 c).

### 2.3.3 Cadbury

The Cadbury case of using augmented reality is a unique one to be described and probably one of the most effective use of AR packaging ever done. This campaign won several of the awards like “*best use of augmented reality*” at the

drum “MOMA 2018” award (The drum mobile awards 2018) and “most effective AR/VR campaign” at the Masterclassing’s effective digital marketing awards. (Blippar 2018 b.) The Cadbury Christmas advent calendar is a great example of traditions that are loved and appreciated by people, twisted with technologies, that are also loved and appreciated by people. The challenge for Cadbury was to engage teenagers, who had outgrown the tradition of advent calendars, to participate in this festive period, and to use the AR technologies that give an access to various features, like filters, that are more loved by the audience of teenagers. The campaign earned a great success and fulfilled the goals that were stated as to *“drive strong and repeat engagement, social sharing, and enhance the perceived value of an advent calendar”*. (Blippar 2019 d.) The fulfilled goals had of course their effect on the financial results of the Christmas campaign. The Cadbury advent calendar, that was stated to be *“the fourth best-selling advent calendar in UK in December 2017”* (Blippar 2019 e.) has generated the sales of more than 570 000 units with the financial equivalent of about 2.5 million pounds. *“The calendar generated 200 000 interactions with and interaction rate of 35.2% and the rate of 43% of customers being engaged on multiple days.”* (Blippar 2018 b.) This example justifies the possibility of augmented reality to be a useful tool in generating the growth of sales hence the growth of financial profit from the marketing campaigns that involve AR packaging. It is especially effective with the tools like filters to increase the social sharing rates as the trend among users of smartphone in taking and sharing pictures and selfies online is a huge thing and cannot be ignored.



Figure 11 Cadbury AR packaging (Blippar 2019 e.)

### 2.3.4 Boost

Boost is the energy drinking brand, created by GSK British pharmaceutical company, that is widely spread and popular in India. Over the last few years, the company, manufacturing the boost drinks, have already implemented two AR campaigns in collaboration with Blippar. The repetition of the campaign therefore highlights the effectiveness of the first one. Considering Boost being the energy drink, the second campaign focused on integrating it with the most popular sport game in India, cricket. Based on the Blippar brief explanation of the case, the goal was to *“inspire children to ‘unleash the winner in themselves’”* (Blippar 2019 f). The business goal that can be allocated from the case description is to increase the brand engagement. Hence, the highlighted result was 3.5 interactions per user. To describe, this Boost packaging opened customers the access to some cricket lessons starring the top Indian cricket players, which brings the customers, children in this case, closer to their heroes and increases their own productivity. (Blippar 2018 c.)



Figure 12 Boost AR packaging (Blippar 2019 f).

### 2.3.5 McDonald's

The goal of the following McDonald's Christmas campaign in UK in collaboration with Blippar was to *"drive frequency and repeat purchase to McDonald's restaurants over Christmas"* (Blippar 2019 g). As advent calendars are one of the most popular Christmas traditions in United Kingdom, the company decided to embrace it in the campaign. McDonald's tray liners were turned into the interactive experience of advent calendars with the content being changed every day during the festival time. The content of the calendar included various games, filters, mostly selfie filters, different animations and vouchers for online shops like Amazon. The campaign gained the success as around 12000 people scanned for three or more days during the festive period. (Blippar 2019 g) This case also outlines how augmented reality affects the dining experience by adding the fun content or some social activities in it (Fisher 2018).





Figure 13 McDonalds AR packaging (Blippar 2019 g).

### 2.3.6 Subway x Pepsi Max

Subway with Pepsi Max (packaging of Pepsi max) is one more case of the way how augmented reality is affecting the dining experience. This case describes the way AR increases the so called 'basket' size, which means increasing the ordering size. (Fisher 2018.)

This particular case covers the collaboration of Pepsi Max and Blippar that took place in Subway. The goal as it is stated on Blippar was to “*encourage customers to purchase a Pepsi Max with their Subway meal*” (Blippar 2019 h). The company gained the result of around 70 000 people scanning the AR packaging on the Pepsi Max cups, which opened the jukebox with both music and videos played. Nevertheless, the main trigger was still the possibility to win various festival and gig tickets. The sales of Pepsi Max together with the Subway meals increased greatly during the campaign. (Blippar 2019 h.)

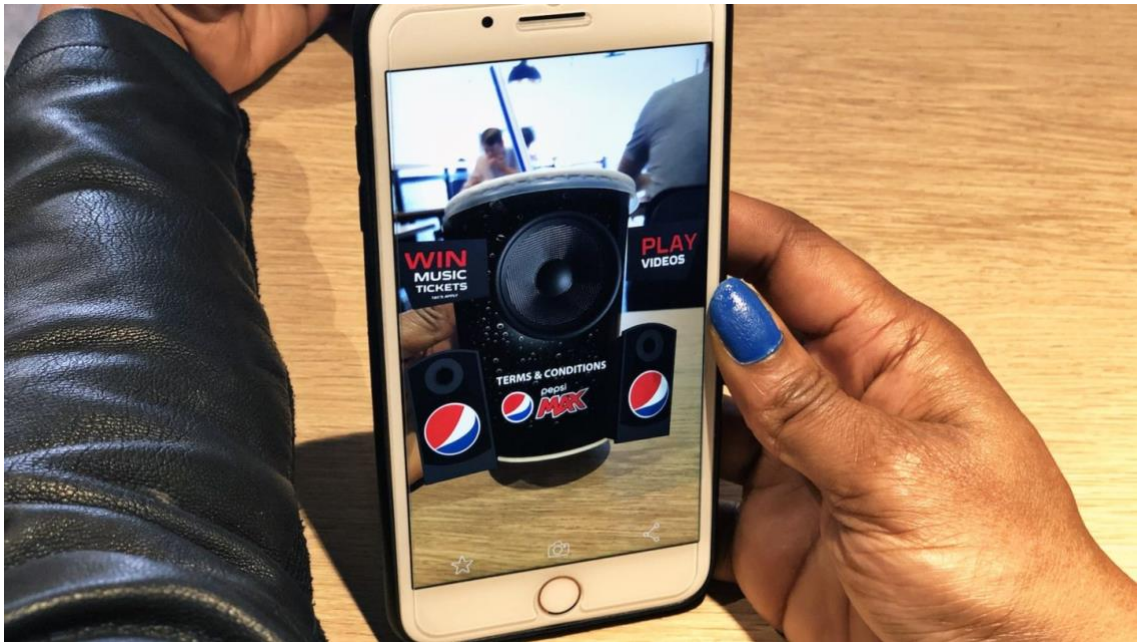


Figure 14 Pepsi Max AR packaging (Blippar 2019 h).

### 2.3.7 Heinz

The Heinz case was one of the first cases of AR packaging in F&B industry. It was launched in 2011 as a marketing campaign, that integrated around 170 000 unique global scans with the whole number of scans being 570 000. The idea of this AR packaging was to promote Heinz ketchup as the cooking ingredient. The consumer, after scanning the packaging, received an access to an online visualized recipe book with various recipes that included Heinz ketchup as one of the ingredient. (Labels & labelling 2019; Macleod 2011.)

This kind of AR packaging of food and drinks that gives access to different interesting explanations on how to use the product stimulates the increased (comparing to without it) use of the product which leads to the faster ending of the product and, if the experience was satisfactory, stimulates the repeated purchases of the product.



Figure 15 Heinz AR packaging (Shashank 2017)

### 2.3.8 19 Crimes

19 Crimes is probably the most fascinating and most successful case of using augmented reality packaging. The company perfectly integrated AR with the brand value and the brand positioning, which turned out to be the great trigger to catch the attention of the customer and to reach the leading positions on the market. Wine industry is a highly competitive industry, where it is extremely hard for new companies to gain success and to get to the top of the industry. To achieve the goals in this industry, companies must bring up something new in their brand and position their brand so that it outstands others in the industry.

19 Crimes brand is itself a whole new experience. This Australian brand created their wine lines based on the stories of British prisoners, who were sent to Australia in 1800's for the violation of '19 Crimes'. Among those crimes were the *"impersonation of Egyptian, clandestine marriage, bigamy, and stealing letters"*. (Stone 2017.) 19 crimes integrated their authentic brand story, that is loved by the customers, and modern technologies to create the unique exciting user



experience. *“Our insight clearly shows that millennials like brands with real and authentic stories and our AR innovation really brings the 19 Crimes story to life”* says the Treasury Wine Estates managing director Tom King. (Gwynn 2017.) So what is exactly happening in the packaging of the 19 Crimes bottle? Using augmented reality and 19 Crimes app customers can scan the bottle packaging with the prisoners portrayed on it. As soon as the user does that, it turns out that the packaging is alive and those people on it start to tell you their stories, which represent the stories of those 19 crimes. (Stone 2017.) Some of the comments on the app store state following: *“A fantastic app that brings a little piece of history to life”*, or *“I jumped out of my skin when the mugshot spoke to me”* (Stone 2017).



Figure 16 19 Crimes AR packaging (19 Crimes 2019).

The campaign turned out to be a great success for 19 Crimes and helped to increase the indicators by more than 50%. As it was reported, on 2017, when the



campaign was launched, they have shipped more than a million cases. The sales volume increased for 60% and the brand in value increased for around 70%. (19 Crimes 2019.)

## 2.4 Healthy lifestyle trend

Healthy lifestyle is a fast-growing trend among people globally. Mostly in developed countries people are highly committed to maintain their health. This arise the increase in the healthcare, wellness and fitness applications and programs. Sport and sport companies are very popular among young people nowadays. (PWC 2019.)

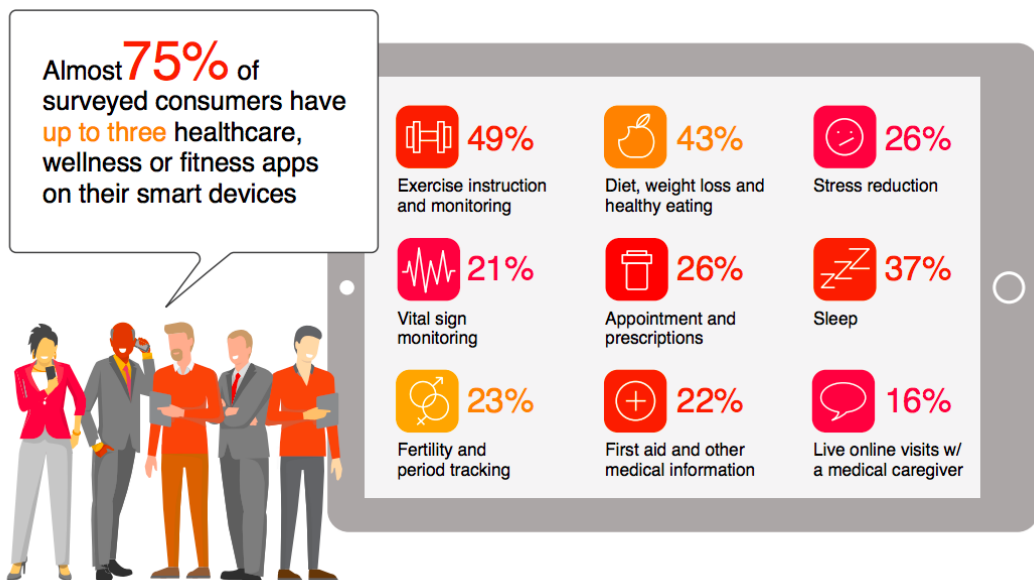


Figure 17 Wide adoption of healthcare, wellness and fitness apps (PWC 2019).

Together with the sport, the result of this healthy lifestyle trend is the increase in humans' attention to the products they consume, for example: what it contains, how the food was grown, is it organic, were there only natural ingredients used, how healthy is the food they eat. Therefore, companies tend to show more sustainability identifications for the customers, to assure them and gain some brand advantage in this competition on the "industry of healthy lifestyle".

In this competition packaging can play a crucial role to stimulate the person to make a purchasing decision. Of course, the packaging design itself, especially

eco-friendly, plays the sufficient role in communicating to the customer the ecological origin of the product. However, AR packaging may add even more value to this competition. One of the cases describing how it can be used in the packaging to compete is the ‘Visual Trust Initiative’, a joint project of such companies as Blippar (augmented reality developer), SGS (inspection, verification, testing and certification company), Carrefour (French retailer) and Transparency-One (supply chain management platform). The initiative takes place in China. The system works to let the customers look at the origins of the product they are willing to buy and to check its quality with the help of their smartphones and augmented reality system. It was considered as some of the first steps that were taken to fulfill the needs and expectations of the modern customer. (Murphy 2017; SGS 2017.)

*“Forward-thinking retailers need to be aware that customers now demand credible assurances regarding the quality and origin of their purchases” (SGS 2017).*



Figure 18 Visual trust initiative (SGS 2017).



Figure 19 Uncle Ben's AR sustainability case (Blippar 2018 d).

One more case of AR packaging showcasing the sustainability of the brand is the Uncle Ben's case, which took place in France, where Uncle Ben's in collaboration with Blippar launched the campaign to showcase the whole and long process that starts from the way the rice was grown in a farm and ends as the cooked rice at home of the customer. The infographics show customers the level of commitment to the sustainability of the process. Together with the educational content, Uncle Ben's decided to include in AR packaging the interactive recipe ideas, to enhance the consumption of the Basmati rice. (Blippar 2018 d.)

This Uncle Ben's project requires the knowledge of the supply chain and the quality systems, therefore this collaboration as well included the joint work of the SGS company and the Transparency-One. *"The Transparency-One platform maps the entire supply chain and visualizes this data. SGS collects and verifies supply chain data to ensure accuracy. Blippar ... puts this information directly into the hands of the consumer via its app."* (Blippar 2018 d.)

### **3 Empirical research**

The following chapter covers all the aspects related to the empirical part of this study in terms of focus group surveys and expert interview. This includes the description of the steps being undertaken to create the questions to be asked in both situations, the justification of the necessity of them, analyses and the highlights of the results being derived.

#### **3.1 Survey**

As it was stated earlier, the focus group survey in this research works as the main empirical research to justify the suggested theory. The survey chapter is divided in two subchapters. The survey preparation discusses the way the survey was designed, how the questionnaire was formulated and why the exact questions were asked. The second part, survey analysis, discusses the results that were acquainted during the survey and what those results mean to the study.

##### **3.1.1 Survey preparation**

The survey preparation began after the method of collecting the primary data was chosen. It was decided to convey the online questionnaire that can be spread on both markets that were studied. To implement that, the researcher decided to use the Google forms, which made the whole research much easier. Due to the variety of the markets being researched, it was decided to prepare two identical questionnaires, but in two different languages: in Russian language for the Russian market, and in English language for the Finnish market. The decision was made so to acquire the most accurate information, so that respondents in the Russian market will understand the questions better. Unfortunately, the researcher does not have the knowledge of Finnish language and therefore uses the English language, which is widely spread among the focus group that was asked in the Finnish market. The questions were translated with a great attention so their meaning in both languages is identical.

The questionnaire contained seven questions, including the open-ended questions and the scale rating question. The framework of the questionnaires and the arising results can be found in Appendix 1 (English version) and Appendix 2 (Russian version). The first two opening questions of the survey, which are 'How old are you?' and 'Are you a student?' are included to help the author identify the answers of the focus group that are studied in the research. The next question 'Do you know what AR packaging is?' is the fundamental for the author to see whether respondents understand the technology and whether they had an experience of using it. The answer to this question leads to the next logically arisen question 'Did AR packaging attract your attention more than just normal packaging?', which is only referred to those respondents, who had an experience of using AR packaging. The answer to this question shows whether people are attracted by this technology. The next two questions of the survey display to the respondent the potential situation, where two nearly identical products (one is with AR packaging and another is without it) are shown and the choice between them should be made. The first of those two questions let the respondent only to choose between two products, whereas the second question lets the respondent give another option as an answer. The next question is the scaling question, which asks the respondent to rate on the scale from 1 to 10 how 'cool' is the 19 Crimes AR packaging case. The final question is an open-ended question which is 'Describe in few words how do you feel about the integration of technologies in your shopping routine?' The answers to this question are the overall look of the focus group either positive or negative on the digitalization of the shopping processes. The answers to the final question are listed in the appendices 1 and 2, however, some of the answers containing inappropriate language were not listed, although they were considered by the researcher during the evaluation process. The questionnaire was tested in the group of people before being published to make it the most effective and appropriate way and to minimize the possible mistakes and inaccuracies in the answers.

### 3.1.2 Survey analysis

Most of the respondents who participated in the research demographically represented the focus group being aged from 20 to 30 perfectly with only 13% of them being outside the age frame. However, the maximum deviation was three years, it was considered to count all the answers in the evaluation process as of them being all in the focus group. Out of all the respondents in Finnish market, 92% were the students, whereas in Russian market that number was 90%, which also goes along perfectly with the respondents being the most appropriate focus group to study.

The notable difference in the markets is illustrated in the results of the third question 'Do you know what AR packaging is?'.

	Finnish market	Russian market
Yes, I used it	30%	6%
Heard, but never used it	34%	34%
Never heard of it	36%	60%

Table 1 Question 3 results.

More than 60% of respondents in Finnish market at least know what AR packaging is, whereas in Russian market the same percentage of people have no idea of what the augmented reality packaging is and only 6% of them used it at least ones, which is a very low percentage. This mostly describes the Finnish market as more technologically developed in the processes of everyday life than the Russian market.

The following question which was addressed to those who tried and used the AR packaging, was whether it attracted more attention. Unfortunately, those results presented in the Russian market are not appropriate ones, as only 6% of respondents tried the technology, which accounts to three people out of the 50, but it turned out that the question was answered by 12 respondents, which is inappropriate. However, all those three respondents in the Russian focus group, who used AR packaging, stated that it attracted more of their attention, which is

roughly 100%. The same kind of the answer lag occurs in the Finnish focus group. After the double check of all the answers separately, it turned out that out of 15 people, who used AR packaging, only one respondent stated, that it did not attract attention, which is 7%, whereas 14 of others stated that it attracted, which is roughly 93%.

The next two questions were the ‘reaction to the situation’ questions. The first one roughly expressed the Heinz case. ‘If you will have a choice of the same products with nearly the same packaging design, but one of them will have access to the recipe book with the use of that product, which will you most likely choose?’

	Finnish market	Russian market
The one with an access to the recipe book	90%	92%
The one without an access to the recipe book	10%	8%

Table 2 Question 5 results.

Out of the answers received, it is seen that, although the knowledge and the experience of using the AR packaging is different in the markets, the customers tend to like the extended benefits of augmented reality more and are willing to buy the product with AR packaging rather than the one with normal packaging out of two similar products.

The second question was: ‘If you have a choice of the same products with nearly the same packaging design, but with the use of AR packaging one of them will give you much broader information on the ingredients, manufacturing process etc., which will you most likely choose?’

	Finnish market	Russian market
The one with AR packaging	82%	74%

The one without AR packaging	6%	14%
Other	12%	12%

Table 3 Question 6 results.

In both Finnish and Russian market the answers to this question are quite similar. In both markets the same amount of people (12%) answered other, where, the most popular answers would be, that it depends on the product itself. However, still, more than 70% of respondents in both markets (82% in Finnish and 74% in Russian) tend to choose the product with the benefits of augmented reality packaging.

For the next question respondents were evaluating the live video of the 19 crimes AR packaging case and were asked to rate from 1 to 10 how cool the video was. Based on the ratings, more than 80% in Russia and more than 95% of people find it cool (considered cool starting from 6), and more than 50% of respondents in both market find the case extremely cool (rating 9 and 10).

Considering the last question of the survey, which is 'Describe in few words how do you feel about the integration of technologies in your shopping routine?', there is a great difference in the tendency of the answers, that slightly correlates with the level of awareness of what the technology is. However, there are other factors like social, cultural and financial that are influencing the answer to this question, which are not studied in this research and are not the part of it. Anyway, the answers of the Finnish focus group tend to be more positive; people are open to technological changes and are aware of the digitalization process and are willing for it to happen. More than 80% of the respondents feel positive about those changes in their routine. On the opposite, the answers of the respondents from Russian focus group are, if it can be said so, controversial. More than 50% of respondents feel the positivity of the changes, however they always have some negative points mentioned. Most of the answers mentioned that technological and digital changes is a good and positive trend, however, most probably it will not work in the Russian market. Despite some negative attitude that can be



allocated from the answers, the main tendency and the main trend is the positive thinking and positive perception of digital and technological changes.

## **3.2 Interview**

As a part of the empirical research the author of the thesis conducted a personal face to face interview with an expert. As it was stated previously, the expert who was participating in this interview, is a strategic director and co-founder of the Russian start-up company Junk Reality, that specializes in visualization processes with an emphasis on VR, AR and 3D technologies. The chapter is divided into two parts: interview preparation and interview analysis. The preparation part covers the way interview is supposed to be proceeded while the analysis part in this chapter will be mostly the interpretation of the discussion that was held.

### **3.2.1 Interview preparation**

The interview was planned to be in a form of free discussion about the industry with an emphasis on the main topic being AR packaging and AR packaging in food and beverage industry. Although the discussion was in a free form, the basic framework of the questions and topics to cover was composed in advance and helped the author to maintain and control the flow of the discussion. The rough framework of questions for the interview can be found in Appendix 3. The interview is conducted in Russian language and is recorded on the voice recorder to make it easier for the further processing and analyzing. For the access to the audio tape of the interview the author of the thesis should be contacted.

### **3.2.2 Interview analysis**

The discussion started with the first introductory question of the professional background of the interviewee and why he made a choice to work in a sphere of visualization and digital technologies, among which VR and AR are. The interviewee has the background of bachelor's diploma in economics and the

MBA, he as well has the background of studying modules in such universities as Sanford, Warwick Business School, MIT and many others. Over the past few years, and currently as well, he teaches MBA programs for students in Russia and overseas. The professional career of the interviewee also was developing quite fast and covered such areas as marketing, consulting, strategic consulting. Currently he and his company emphasizes on the digital transformation in business. The idea of doing business in the sphere of virtual reality and augmented reality was chosen not for 'hype' but for it being a tool to gain the competitive advantage as in today's world it is a new 'window' for communication. An example to justify: filters in Instagram that are now used by most of the people daily.

Augmented reality today is still in the beginning stages of gaining popularity. The most popular use of AR nowadays is AR filters. They can be seen in Instagram, in Snapchat, in Facebook etc. The description of this filters phenomenon increase is due to the audience in those social media platforms, where it is widely used now. Most of those using the media and the filters there actively are millennials and generation Z. This audience is looking more for fun and "wow" content, which filters do provide. People, mostly women are worried about their appearances and looks. The result to that is the enormous number of makeup filters, filters with glitter, butterflies etc. that all tend to change the look and to make a person look prettier. Packaging is more practical thing and is to be used in businesses. Unfortunately, the cases of packaging are much less than the cases of filters, as businesses for now are not 100% convinced that this technology truly works and can truly boost the sales and those indicators like brand awareness. (The example that occurred was the 19 Crimes success in the highly competitive wine industry). Of course, AR packaging is effective, whether it is an educational content or entertainment. In food and drinks the focus mostly is on the origins, or the recipes, or the nutrient questions etc. In winery industry it is a solution, as mostly people have a little understanding of what is which wine. AR helps the customer to remove any suspicions that can appear. If products are simple, then wow effect content in AR packaging may be more effective, if products are 'complex', then informational content in AR packaging may be more effective.

The system of identifying for example the ROI (return on investments) index in the case of AR is quite blurry. The effectiveness can be represented differently. Either it is the sales increase, or increase in the brand engagement etc. Theoretically, it is possible to link the number of 'downloads' with the financial activity, however, AR packaging mostly influences the attractiveness and popularity of the brand among potential customers and those are very abstract concepts that are hardly linked with the financial performance. Once again, AR is a marketing communication tool. In general, the case price starts with 500 000 rubles (prices in Russia, around 7000 euros), but if the case is the primitive one that can be done on the existing platform, it can cost around 50 000 rubles (prices in Russia, around 700 euros).

The only way to make companies to use AR packaging is to show the cases. The cases show how technology works. The more cases exist, the more companies start to understand how effective it is. The market of AR is growing and is growing very quickly.

## 4 Conclusion

The main objective of this study was to justify the theory that augmented reality packaging is an effective marketing tool to be used to attract potential customers. The theoretical as well as empirical research, that were presented in this study, fully covered the topic and proved the theory. The research questions which were stated at the beginning of the study, now can be answered.

- Does AR packaging work as a tool to increase attraction towards the product? - Yes, it does.
- Does AR packaging as a marketing tool help to develop communication with the customer? - Yes, it does. In fact, AR packaging is a new marketing communication tool.

This study and this thesis was written only from the marketing perspective and lacks some explanations of the technological approach as well as psychological perception. However, from the marketing perspective, it was studied deep and profound and covered various concepts. This leads to one more outcome of the study that the researcher allocated in addition to the answered research questions and justified theory. The importance of such concepts as digitalization and digital transformation cannot be ignored nowadays. In fact, those processes are the main factor affecting most of the changes in the behavioristic patterns.

The author sees a great potential in the topic of augmented reality, with an emphasis on the augmented reality packaging. The potential in the industry market, as was shown during the study, is enormous and continues to grow with extreme numbers. The researcher insists, that it is one of the realities of 'the future' of marketing communication in all its marketing communication mix occurrences. The author as well identifies this research as a successful research and sees it as a commencement for further studies on this topic being implemented.

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Bershtein R. 2018. Digital marketing in the age of virtual and augmented reality. Forbes magazine. <https://www.forbes.com/sites/forbescommunicationscouncil/2018/03/21/digital-marketing-in-the-age-of-virtual-and-augmented-reality/#785ea19766e8>. Accessed on 19 March 2019.

Blippar 2018 a. Magnum partners with Blippar to let people customize their own ice cream using augmented reality. Blippar. <https://www.blippar.com/blog/2018/01/29/magnum-partners-blippar-let-people-customize-their-own-ice-cream-using-augmented-reality>. Accessed on 2 April 2019.

Blippar 2018 b. Case study: how AR reinvented Cadbury's traditional advent calendar to drive huge engagement & social sharing. Blippar <https://www.blippar.com/blog/2018/05/22/case-study-how-ar-reinvented-cadburys-traditional-advent-calendar-drive-huge-engagement-social-sharing>. Accessed on 25 March 2019.

Blippar 2018 c. Boost's AR experience lets millions of kids learn to play cricket from their sporting heroes. Blippar. <https://www.blippar.com/blog/2018/06/25/boosts-ar-experience-lets-millions-kids-learn-play-cricket-their-sporting-heroes>. Accessed on 22 March 2019.

Blippar 2018 d. Case study: how Uncle Ben's is using augmented reality to showcase its sustainability pledges. Blippar. <https://www.blippar.com/blog/2018/02/13/case-study-how-uncle-bens-using-augmented-reality-showcase-its-sustainability-pledges>. Accessed on 25 March 2019.

Blippar 2019 a. Blippar web page. Blippar. <https://www.blippar.com/>. Accessed on 16 March 2019.

Blippar 2019 b. Nesquik case. Blippar. <https://www.blippar.com/work/nesquik>. Accessed on 16 March 2019.

Blippar 2019 c. Kellogg's case. Blippar. <https://www.blippar.com/work/kelloggs>. Accessed on 16 March 2019.

Blippar 2019 d. Cadbury case. Blippar. <https://www.blippar.com/work/cadbury>. Accessed on 16 March 2019.

Blippar 2019 e. Cadbury embraces AR this Christmas with AR advent calendar. Blippar <https://www.blippar.com/blog/2017/12/05/brands-embrace-ar-christmas-cadbury-heroes-ar-advent-calendar>. Accessed on 16 March 2019.

Blippar 2019 f. Boost case. Blippar. <https://www.blippar.com/work/boost>. Accessed on 16 March 2019.

Blippar 2019 g. McDonald's case. Blippar. <https://www.blippar.com/work/mcdonalds>. Accessed on 16 March 2019.

Blippar 2019 h. Pepsi Max case. Blippar. <https://www.blippar.com/work/subway-pepsi-max>. Accessed on 16 March 2019.

Bullock L. 2018. AR and Social media: Is augmented reality the future of social media? Forbes magazine. <https://www.forbes.com/sites/lilachbullock/2018/11/16/ar-and-social-media-is-augmented-reality-the-future-of-social-media/#5fb95e21e141>. Accessed on 18 March 2019.

Business Jargons 2019. Marketing communication. Business Jargon. <https://businessjargons.com/marketing-communication.html>. Accessed on 20 March 2019.

Business Wire 2018. Augmented reality and virtual reality market by offering, device, type, application, and geography – global forecast to 2023. <https://www.businesswire.com/news/home/20180508005963/en/Global-Augmented-Reality-AR-Virtual-Reality-VR>. Accessed on 27 January 2019.

Charlesworth A. 2018. Digital marketing: a practical approach. 3<sup>rd</sup> edition. Routledge. Taylor & Francis group. Accessed on 10 March 2019.

Dietrich C. 2010. Decision making: factors that influence decision making, heuristics used, and decision outcomes. Inquiries journal. <http://www.inquiriesjournal.com/articles/180/decision-making-factors-that-influence-decision-making-heuristics-used-and-decision-outcomes>. Accessed on 18 March 2019.

Edelman D. C., Singer M. 2015. Competing on customer journeys. Harvard business review. <https://hbr.org/2015/11/competing-on-customer-journeys>. Accessed on 8 March 2019.

Facebook newsroom 2019. Statistics. Facebook newsroom. <https://newsroom.fb.com/company-info/>. Accessed on 5 April 2019.

Fill C., Jamieson B. 2006. Marketing communications. Edinburgh business school. Heriot-Watt university. Accessed on 20 March 2019.

Financial times lexicon 2019. Definition of digital marketing. Financial times lexicon. <http://lexicon.ft.com/Term?term=digital-marketing>. Accessed on 15 March 2019.

Fisher L. 2018. 3 ways augmented reality can benefit quick service restaurants. Blippar. <https://www.blippar.com/blog/2018/06/19/3-ways-augmented-reality-can-benefit-quick-service-restaurants>. Accessed on 16 March 2019.



Gartner IT glossary 2019. Digitalization definition. Gartner IT glossary. <https://www.gartner.com/it-glossary/?s=Digitalization>. Accessed on 17 March 2019.

Gartner IT glossary 2019. Digital business transformation definition. Gartner IT glossary. <https://www.gartner.com/it-glossary/digital-business-transformation>. Accessed on 17 March 2019.

Gwynn S. 2017. Wine brand 19 crimes uses AR to make 19<sup>th</sup> century convicts come to life. Haymarket media group Ltd. <https://www.campaignlive.co.uk/article/wine-brand-19-crimes-uses-ar-19th-century-convicts-life/1445947>. Accessed on 3 April 2019.

Hills-Duty R. 2018. Kellogg's team with Blippar for AR learning experience. VR focus. <https://www.vrfocus.com/2018/07/kelloggs-team-with-blippar-for-ar-learning-experience/>. Accessed on 23 March 2019.

India C. 2016. What is augmented reality and how will it affect digital marketing? Cyberclick. <https://www.cyberclick.es/numericalblogen/what-is-augmented-reality-and-how-will-it-affect-digital-marketing>. Accessed on 3 April 2019.

Junk Reality 2019. Junk reality main web page. <http://junkreality.com>. Accessed on 15 March 2019.

Kotler P., Armstrong G. 2017. Principles of marketing, global edition. Pearson education limited. Accessed on 20 November 2018.

Kumar S. 2017. How does augmented reality work? AugRealityPedia. <https://www.augrealitypedia.com/>. Accessed on 26 March 2019.

Labels & labelling 2019. Blippar claims success with AR take up. Labels & labelling. <http://www.labelsandlabeling.com/news/latest/blippar-claims-success-ar-take>. Accessed on 23 March 2019.

Macleod I. 2011. Heinz launches augmented reality trial with Blippar. The drum. <https://www.thedrum.com/news/2011/10/27/heinz-launches-ketchup-augmented-reality-trial-blippar>. Accessed on 23 March 2019.

Murphy N. 2017. Visual Trust Initiative provides supply chain transparency. Food processing. <https://www.foodprocessing.com.au/content/materials-handling-storage-and-supply-chain/news/visual-trust-initiative-provides-supply-chain-transparency-143413708>. Accessed on 25 March 2019.

Proctor T. 2005. Essentials of marketing research. 4<sup>th</sup> edition. Pearson education limited. Accessed on 12 March 2019.

PWC 2019. It's time for a consumer-centred metric: introducing 'return on experience'. Global consumer insights survey 2019. PWC. <https://www.pwc.com/gx/en/consumer-markets/consumer-insights-survey/2019/report.pdf>. Accessed on 1 April 2019.

Reality 2019. The ultimate guide to understanding augmented reality (AR) technologies. Reality. <https://www.realitytechnologies.com/augmented-reality/>. Accessed on 27 February 2019.

Saunders M., Lewis P., Thornhill A. 2009, Research Methods for Business Students. 5<sup>th</sup> edition. Pearson education. Accessed on 27 February 2019.

SGS 2017. SGS launches Chinese Visual Trust Initiative with Carrefour. SGS. <https://www.sgs.com/en/news/2017/10/sgs-launches-chinese-visual-trust-initiative-with-carrefour>. Accessed on 25 March 2019.

Shashank D. 2017. Top 5 augmented reality apps of 2017. Techprior. <https://www.techprior.com/top-5-augmented-reality-apps-of-2017/>. Accessed on 21 March 2019.

Smith P. R., Zook Z. 2016. Marketing communications. Offline and online integration, engagement and analytics. 6<sup>th</sup> edition. Kogan page limited. Accessed on 10 March 2019.

Statista 2019. Forecast augmented (AR) and virtual reality (VR) market size worldwide from 2016 to 2022 (in billion U.S. dollars). Statista, the statistics portal. <https://www.statista.com/statistics/591181/global-augmented-virtual-reality-market-size/>. Accessed on 27 January 2019.

Statista 2019. Number of monthly active Instagram users from January 2013 to June 2018 (in millions). Statista, the statistics portal. <https://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/>. Accessed on 5 April 2019.

Statista 2019. Number of smartphone users worldwide from 2014 to 2020 (in billions). Statista, the statistics portal. <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>. Accessed on 27 January 2019.

Stone Z. 2017. 19 crimes wine is an amazing example of adult targeted augmented reality. Forbes magazine. <https://www.forbes.com/sites/zarastone/2017/12/12/19-crimes-wine-is-an-amazing-example-of-adult-targeted-augmented-reality/#b7285b47de31>. Accessed on 24 March 2019.

The drum mobile awards 2018. Blippar, Design Bridge: Cadbury heroes Christmas adventure. The drum mobile awards. <https://www.thedrummobileawards.com/moma-2018/best-use-of-3daugmented-reality-vr/cadbury-heroes-christmas-adventure>. Accessed on 1 April 2019.

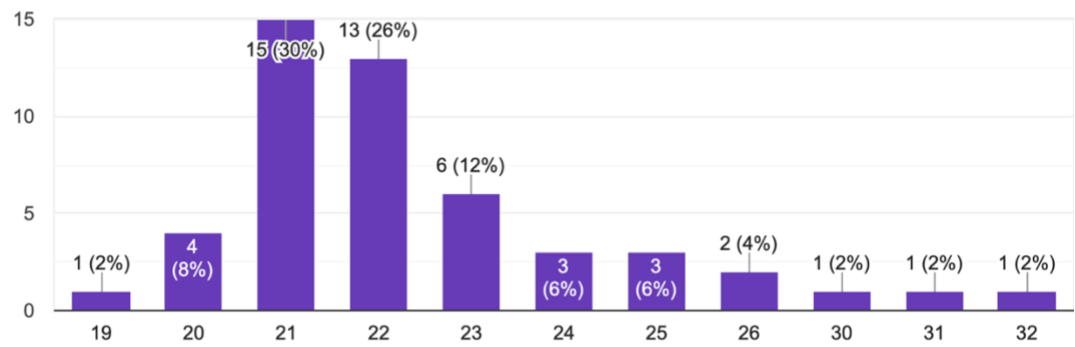
19 Crimes 2019. 19 Crimes web site. <https://www.19crimes.com/en-us/wines>. Accessed on 20 March 2019.

## Appendices

### Appendix 1. Online survey framework and results in English.

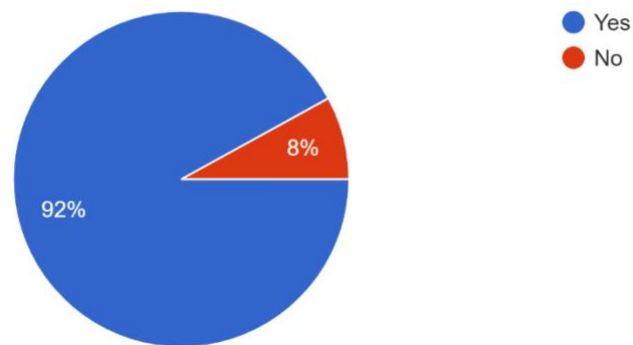
#### How old are you?

50 responses



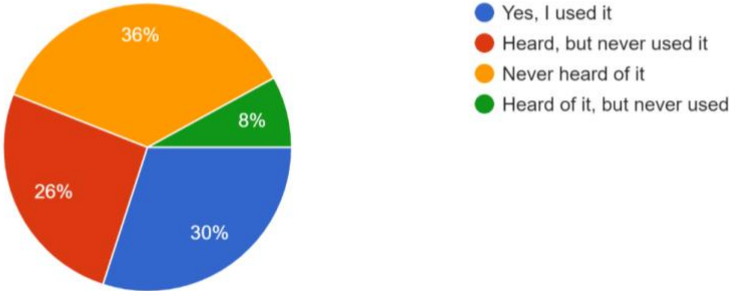
#### Are you a student?

50 responses



### Do you know what AR packaging is?

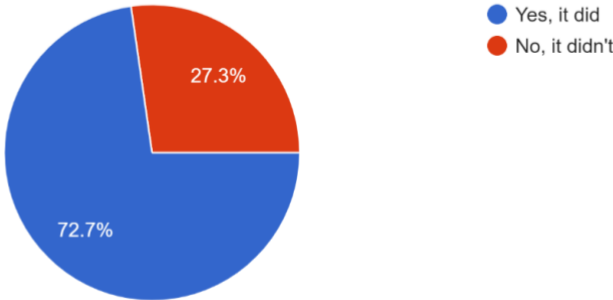
50 responses



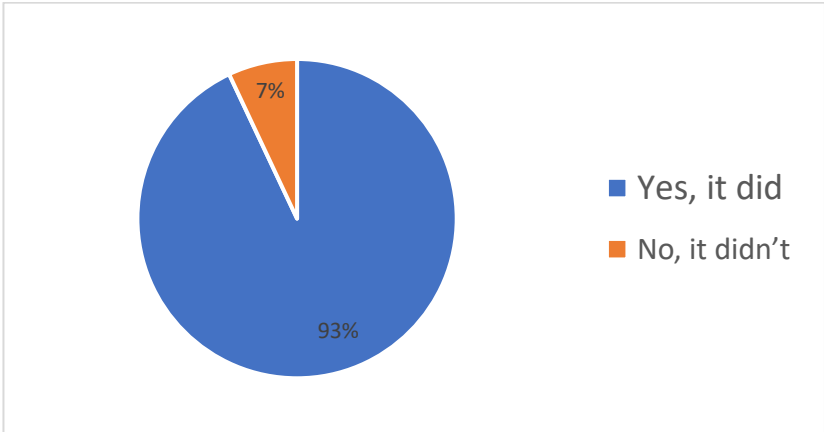
1

### (answer this question if you answered Yes, I used it in previous question) Did AR packaging attracted your attention more, than just normal packaging?

22 responses



2



3

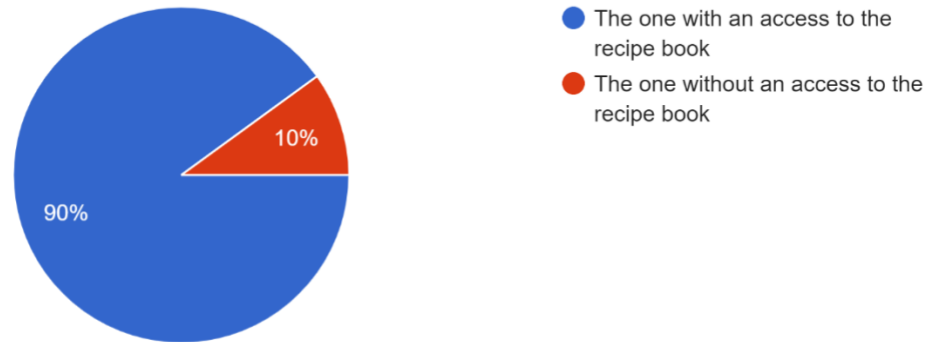
<sup>1</sup> Heard, but never used it – 34%

<sup>2</sup> Inappropriate numbers

<sup>3</sup> Reevaluated result of question 4

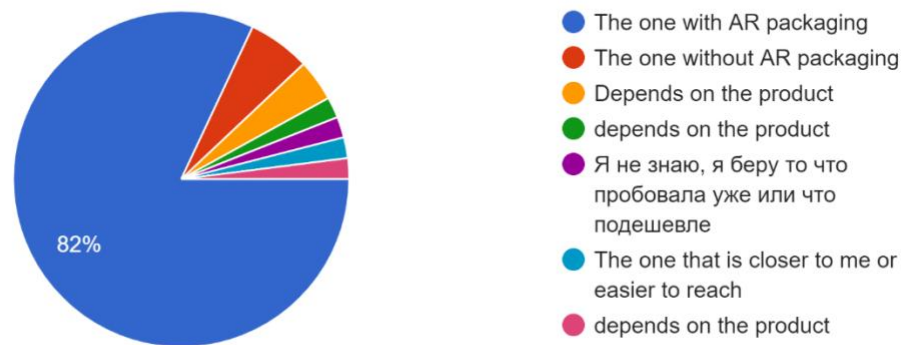
If you will have a choice of the same products with nearly the same packaging design, but one of them wil..., which will you most likely choose?

50 responses



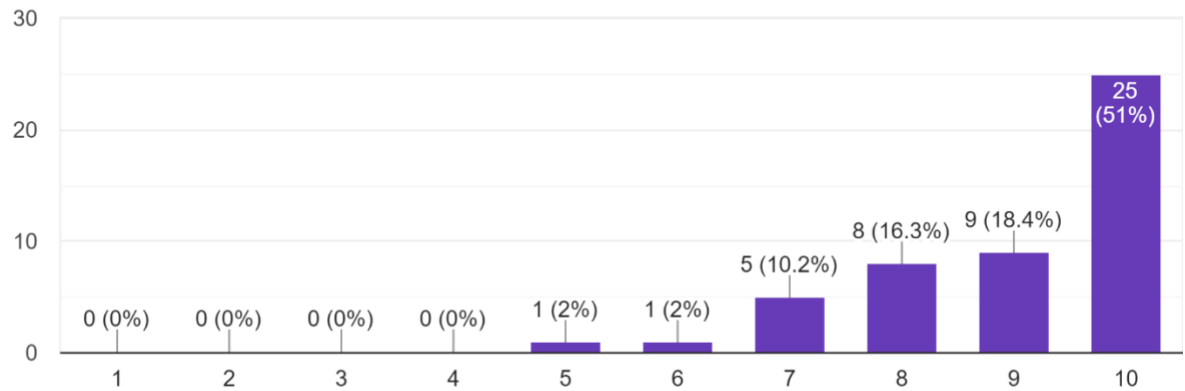
If you will have a choice of the same products with nearly the same packaging design, but with the use of ..., which will you most likely choose?

50 responses



## On the scale from 1 to 10 describe how cool is the packaging of 19 crimes

49 responses



## Describe in few words how do you feel about the integration of technologies in your shopping routine?

50 responses

- It makes shopping taster and more easier
- Cooooo
- Really interesting. Need to provide useful information. Easy to use. Fast.
- Interesting, nice to get more information about the product with a little effort
- Makes it more exciting
- It's a good thing because the world is changing all the time and it's only natural that more technology will be brought to our everyday lives
- I think its a good thing and gives consumers more information from the products, which is good since most of the people care about the ethnicity, environmental impact etc
- It's okay it doesn't bother me.
- Interesting
- I feel so comfortable because I can obtain more information about the product and it make the experience of shopping more interesting.
- Great

- I have a lot of interest towards AR in general, but when it comes to shopping I usually buy same products. That is the reason why I do not use it or think about it.
- I feel positive about it
- Quite positive, as it eases my life
- fun
- positive
- Amazing, but a bit confusing if it concerns animals
- It is very attractive. As an innovation, it a nice tool to attract new customers to the product.
- Happy about it
- It will help me make better decision
- Very attractive
- Technology can help to decide what to buy, i.e., recipes, tracking the origin of the product, sustainability, etc.
- It makes shopping faster and easier
- Coool
- Really interesting. Need to provide useful information. Easy to use. Fast.
- Interesting, nice to get more information about the product with a little effort
- Makes it more exciting
- It's a good thing because the world is changing all the time and it's only natural that more technology will be brought to our everyday lives
- I think it's a good thing and gives consumers more information from the products, which is good since most of the people care about the ethnicity, environmental impact etc
- It's okay it doesn't bother me.
- Interesting
- I feel so comfortable because I can obtain more information about the product and it make the experience of shopping more interesting.
- Great
- Cool idea, much more interested in cool stuff like the 19 crimes packaging rather than useful stuff like recipes or ingredients (which could be done with a QR code just as well, in my opinion). Most of the stuff out there probably isn't too amazing yet, but it definitely has promise to be something that would make AR packaging products more desirable.
- About AR in general I have a lot interest, but I more or less always buy the same products so I do not feel like I would get something out of it.
- This gonna make it easier
- I am open to any technological innovations
- I think conventional advertising and packaging has lost more than 50% of its efficiency. Ideas change but the form stays the same. We live in an economy of impressions. if the company wants to see some outstanding ROI on marketing, it should concentrate on solutions producing wow-effect and being usable at the same time. a good example of such solution is AR.
- Very impressive
- It's cool if it's easy to access (no special app needed)
- Cool
- I am interested in those changes to occur
- I feel positive about that
- I like the technological changes in my routine, it stops being very boring
- I like the way technologies make it easier to do stuff
- personally, I like all the new technology things involved in my everyday life
- honestly, I don't care
- that's cool
- That's something that will happen no matter what
- This has to make life easier I guess

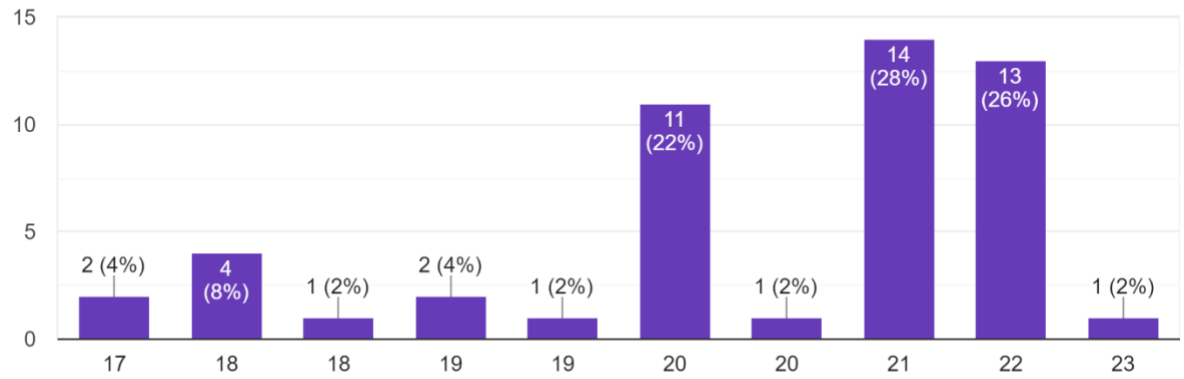
- It is happening already and it's pretty cool
- Well if it will be things like 19 crimes then I am 100% up to those changes
- Highly positive
- I always wonder about what's inside those products I eat so I definitely want that thin like AR when you get the info about the contents and how it is made
- Non-convertible process
- I like games, so extra games will be cool
- hope it would make shopping faster



## Appendix 2. Online survey framework and results in Russian.

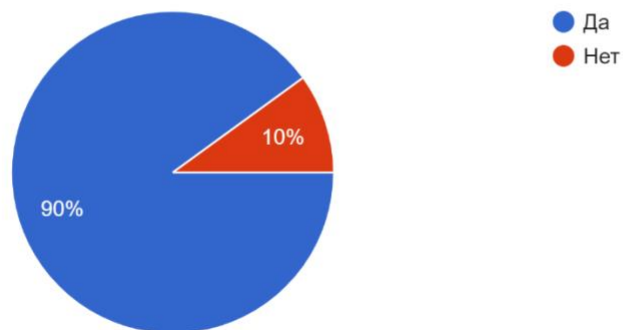
### Сколько вам лет?

50 responses



### Вы студент?

50 responses



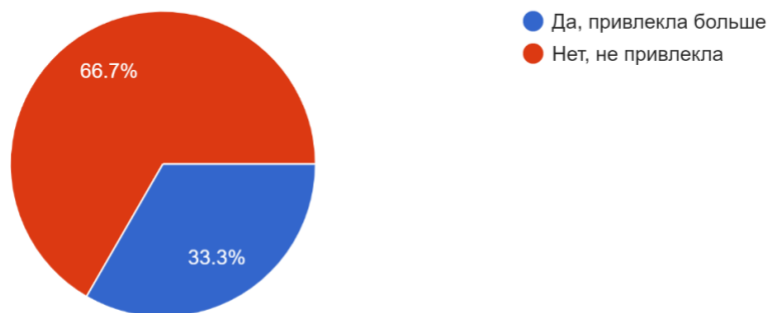
### Знаете ли вы, что такое упаковка в дополненной реальности?

50 responses

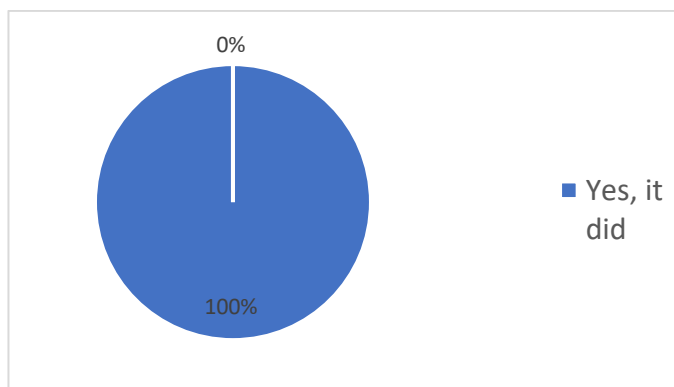


### (ответьте на этот вопрос, если в предыдущем вы выбрали "Да, даже использовал(а)") Привлекла ли вас у...ти больше, чем обычная упаковка?

12 responses



4



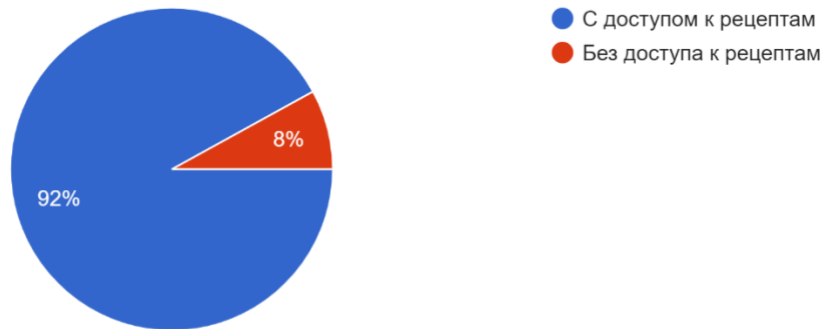
5

<sup>4</sup> Inappropriate results

<sup>5</sup> Reevaluated results of question 4

Если бы перед вами стоял выбор между двумя почти одинаковыми продуктами, но один из них открыл ...одукт вы бы скорее всего выбрали?

50 responses



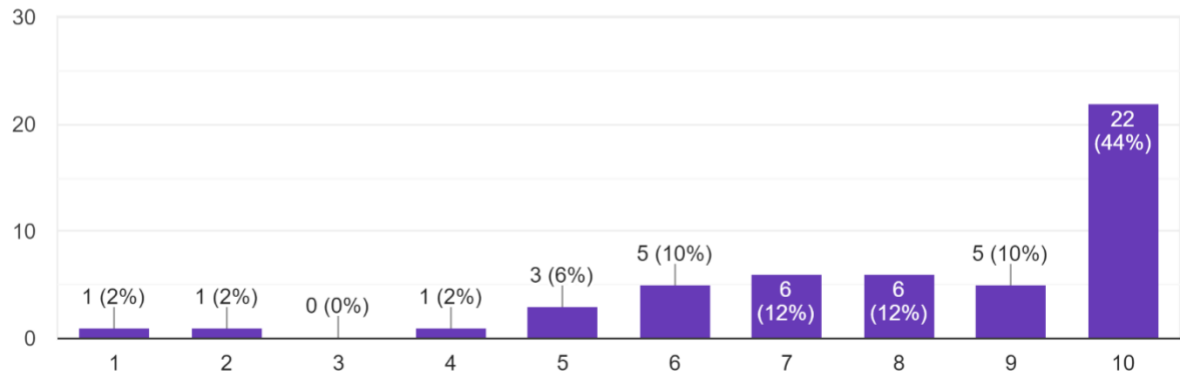
Если бы перед вами стоял выбор между двумя почти одинаковыми продуктами, но с использованием у...одукт вы бы скорее всего выбрали?

50 responses



## Оцените по шкале от 1 до 10 на сколько классная упаковка бренда 19 crimes

50 responses



## Опишите кратко, что вы думаете о внедрении технологий в рутину походов по магазинам

50 responses

люди редко будут использовать это на постоянной основе, это развлечение на пару раз, кроме того, в настоящее время прогресс развит недостаточно, чтобы заинтересовать большой процент потенциальных покупателей

На мой взгляд, это очень интересно, однако на выборочных продуктах, потому что массовое внедрение такой технологии не будет настолько востребовано, покупатель будет тратить много времени на изучение информации в дополненной реальности по каждому продукту в своей корзине (например)

звучит очень хорошо.

Это интересно, но если это будет повсеместно и обыденно, не думаю, что я буду часто это использовать

Прикольно

это интересно но будет занимать больше времени

Футуристичный поход за хлебом -- это классно!

Мне кажется, что это могло бы быть очень интересным явлением

интересная задумка

Увеличит время похода в магазин

- Круто! Я люблю технологии!
- поход в магазин будет длиться часами
- Нет
- Класс! Гуд!
- Это интересно
- Можно, но дорого
- Это очень крутая идея

- Это круто, упрощает жизнь
- Это, должно быть, удобно.
- Лишняя трата времени, чисто приколюха, функционально не очень полезна. Не стоит усилий.
- круто, для необычных продуктов или для продуктов с особым позиционированием. для макарон, например, мне было бы не интересно
- Я этим не пользуюсь потому что лень и неинтересно, но поддерживаю любое развитие в этой сфере ☺☺☺☺
- Норм тема
- интересно, но в российских реалиях не рентабельно
- люди редко будут использовать это на постоянной основе, это развлечение на пару раз, кроме того, в настоящее время прогресс развит недостаточно, чтобы заинтересовать большой процент потенциальных покупателей
- На мой взгляд, это очень интересно, однако на выборочных продуктах, потому что массовое внедрение такой технологии не будет настолько востребовано, покупатель будет тратить много времени на изучение информации в дополненной реальности по каждому продукту в своей корзине (например)
- звучит очень хорошо.
- Это интересно, но если это будет повсеместно и обыденно, не думаю, что я буду часто это использовать
- Прикольно
- это интересно, но будет занимать больше времени
- Футуристичный поход за хлебом - это классно!
- Мне кажется, что это могло бы быть очень интересным явлением
- интересная задумка
- Увеличит время похода в магазин
- Норм
- Я согласен с внедрением данного вида упаковки
- Это было бы здорово, если будет ненавязчиво, недолго и информационно
- Круто, но немного неудобно, когда это касается животных.
- Может быть полезно, но уже на стадии взаимодействия с продуктом дома, а не в супермаркете
- Идея очень прикольная, но скорее всего такой продукт стоить будет гораздо дороже
- норм
- Круто
- Будет проще
- За доставкой на дом будущее, поход в магазин - пережиток
- всё равно
- Крутая штука, она откроет кучу возможностей для продвижения более правильной потребительской модели, правильное питание и все дела.
- Мне лень было бы телефон доставать и с ним ходить.
- Интересно
- Это неизбежно
- Отношусь ко всем инновациям положительно и всячески их приветствую. Главное, что необходимо сделать, чтобы использование технологий было удобным. В существующем варианте дополненная реальностью не во всех случаях является таковой.
- Отличная идея
- Это удобно, особенно в выборе вина, качаешь приложение Vivino, фоткаешь бутылку, смотришь отзывы, описание и ставишь лукасы
- Это скрасит пребывание в магазине

- Слушай, наверное, круто. Только в магазине будем больше времени чиллить, типа пока послушаешь всех чуваков на этикетках
- я не против новых технологий в своей рутине
- думаю, это прикольно
- я люблю технологии
- думаю, это сделает поход по магазинам проще

### Appendix 3. Framework for the expert interview.

The beginning of the interview:

1. The background of an expert
2. Why this exact industry was chosen?

The framework of possible questions and logical flow:

1. Why AR Industry is becoming so popular nowadays?
2. AR packaging is not as usual case of AR as, for example filters in Instagram/Snapchat. Why this happens?
3. How much can AR packaging cost?
4. Is it worth it for the company? What is the ROI?
5. Examples from the Junk Reality cases
6. Does AR develop the communication with the customer?
7. Forecast of the industry development.

Main question: Does AR packaging attracts potential customers and is it worth it for the brand to invest in AR packaging?