

# **ASSESSING POTENTIAL DEMAND FOR A NEW MOBILE APPLICATION IN THE NETHERLANDS**

Market research in the restaurant industry

## Abstract

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Abstract <p>This research paper has analyzed the restaurant market in the Netherlands and assessed the potential viability of the business idea for introducing a new mobile application on the market. This paper aimed to test the extent to which the introduction of a mobile application is relevant to the current market needs.</p> <p>The theoretical framework is based on the theory of market research and market analysis and was informed by relevant academic books and articles. In the theoretical section, the author has defined the components later used in empirical analysis, namely: the country's economic environment, target industry market size, market growth, consumer trends, and potential competitor analysis.</p> <p>To find out if there is a potential market for the new mobile application in the Netherlands, the research was conducted by applying a qualitative research method. The empirical part of the study was split into two parts. The first part used the desk research method and statistics from reliable sources to analyze the current restaurant business environment in the Netherlands. The second part consists of a detailed analysis of 6 semi-structured interviews distributed among the restaurateurs in the Netherlands to find out the challenges they face while doing business. It has also collected their opinions on the mobile application concept and their potential interest in the new product launch.</p> <p>The conclusion is that the application concept is relevant to the current situation in the Dutch market. Would-be users on the business side recognize its potentiality provided that specific minor improvements are made. Thus, the application is believed to improve the business processes and positively impact the profits of foodservice enterprises.</p> <p>Based on these results, the author provides suggestions that could be explored regarding the mobile application concept. It is suggested that new products like a mobile application with unique functions can meet existing consumer needs and boost the profits of the businesses.</p>		
Keywords Restaurant Industry, Market Research, Dutch Market		

## CONTENTS

1	INTRODUCTION.....	1
1.1	Research Background.....	1
1.2	Thesis Objectives, Research Questions, and Limitations .....	2
1.3	Theoretical Framework.....	4
1.4	Research Methodology and Data Collection .....	4
1.5	Thesis Structure.....	6
2	MARKET RESEARCH THEORY .....	8
2.1	Definition of Market Research.....	8
2.2	Purpose of Market Research.....	10
2.3	Process of Market Research.....	11
2.4	Data Collection Methods .....	12
2.5	Components of Market Research Analysis.....	13
2.5.1	Economy and Industry Overview .....	13
2.5.2	Market Size.....	14
2.5.3	Market Growth .....	14
2.5.4	Market Trends.....	15
2.5.5	Competitor Analysis.....	15
2.6	Analysis of Data and Findings.....	15
3	MOBILE APPLICATION INTRODUCTION.....	17
3.1	Mobile Application Concept.....	17
3.2	Target Audience .....	17
3.3	Mobile Functionality.....	18
3.4	Mobile Application Key Features.....	20
3.4.1	Self-Payment .....	20
3.4.2	Food Pre-order .....	21
3.4.3	POS System Integration.....	21
3.5	Mobile Interaction Scheme.....	21
3.6	Mobile Application Visualization.....	22
3.7	Mobile Application Limitations.....	27
4	THE RESTAURANT INDUSTRY .....	29
4.1	The Restaurant Industry Overview.....	29
4.2	Dutch Market .....	29
4.2.1	Dutch Economy .....	30
4.2.2	Dutch Foodservice Market Analysis.....	35

4.2.3	Research Area.....	37
4.3	Restaurant Industry Key Trends .....	38
4.4	Competitor Analysis.....	40
5	EMPIRICAL RESEARCH AND DATA ANALYSIS .....	44
5.1	Empirical Research Design .....	44
5.2	Interview Structure.....	45
5.3	Interview Design .....	45
5.4	Data Collection .....	47
5.5	Data Analysis.....	49
5.5.1	Participants Business Experience.....	50
5.5.2	Mobile Application Testing .....	55
5.5.3	Data Analysis Results.....	62
6	CONCLUSION .....	64
6.1	Answers to the Research Questions.....	64
6.2	Reliability and Validity.....	66
6.3	Suggestions for Further Research .....	67
7	SUMMARY .....	69
8	REFERENCES.....	70
	APPENDICES.....	78

## 1 INTRODUCTION

### 1.1 Research Background

The contemporary restaurant business is at the forefront of the global economy. Demand for eating out is always high, and the restaurant industry is generally competitive, which prompts the restaurant owners to be still in search of ways to increase sales and enhance their customer relationships (Huber, Hancer & George 2010).

The restaurant industry has experienced significant changes in the past two decades and will continue developing even further in the future. Two primary reasons behind these drastic changes are globalization and digitalization of the economy. Globalization or free movement of goods, capital, and people has led to lower prices and greater availability of products and services, thereby placing higher pressures on restaurant businesses to update their business strategies to stay competitive. Digitization of the economy refers to the incorporation of unconventional solutions that offer new ways of customer service and interaction. (OECD 2017).

More products and services that simplify the lives of the consumers become available, and each year sees an increase in the number of consumers that make online purchases from their computers and mobile phones.

In today's highly-competitive environment, it is not enough for restaurants to simply serve great food and provide excellent service to their customers. To maintain profitable revenues and to strengthen their market position, restaurants need to actively implement new technologies and offer new and unique products and services, which are in line with their target customer expectations. A restaurant must create a careful business strategy to retain existing customers and to attract the new ones if it wants to succeed on the market.

Mobile technologies have become an essential part of the way humans interact, and restaurant owners around the world have started to use mobile applications for their advantage. Nowadays, a significant factor contributing to the growth of the restaurant industry is mobile applications and, more precisely, mobile orders.

Restaurants businesses are always concerned with methods to increase their market presence and maximize their profits. However, most operations are constricted by finite time and labor resources, and restaurant managers have to seek ways of how to make their existing processes more efficient. Mobile applications and mobile orders allow the restaurant owners to do exactly that: to engage with their existing client base to improve their experiences, while also maximizing the productivity and efficiency of their business

by saving time on order processes. Therefore, market research is crucial for restaurants that wish to keep up with the constant technological upgrades they could implement in their business operations.

In the current international arena, the Netherlands is among the global leaders in digitalization. It tops the list of the world's most connected countries according to the Global Connectedness Index (GCI) and is ranked as the European leader in digital connectivity (Altman, Gemawat, Bastian 2018; European Commission 2018). The Netherlands has a fast and reliable digital infrastructure, and its high levels of broadband and mobile internet usage make the Dutch population technologically-savvy (CBS 2019).

The Dutch economy has been at the forefront of innovative developments and their integration into businesses. Therefore, the Netherlands is deemed to be a suitable target market to determine the potential viability of a new mobile application concept. This study aims to investigate the current state of the restaurant industry in the Netherlands to evaluate the market potential for a mobile application idea within the country.

The market potential can be defined as “the entire size of the market for a product at a given time”. Determining the market potential of a product requires careful market research that will inform whether the possibility of a product is worth investing in. Some of the essential factors to consider include the target industry and its environment, the target audience, and potential competitors. (Hollensen 2014.)

## 1.2 Thesis Objectives, Research Questions, and Limitations

This subchapter provides objectives and purpose of this study. The research objectives indicate what the research is about and which steps are used to achieve intended results. They serve as evidence of a clear purpose of the research. (Saunders, Lewis & Thornhill 2016, 45-46.)

The main objective of this thesis is to study the restaurant industry in the Netherlands to determine the potential demand for a new mobile application. The mobile application aims to optimize the service process, which will benefit both the business owners and customers by improving their communication and reducing the waiting time for both parties. The communication process between the restaurant owners and their clients is optimized through an online communication platform as well as the replacement of some of the waiter services with online functions. The application aims to benefit the restaurants with the full-type of services such as restaurants, cafes, and bars.

Conducting market research is an efficient method for estimating a market demand for a new product. It allows the author to investigate market viability, minimize business risks and make strategic decisions based on precise information instead of relying on intuition and hunch (Hague 2016). Conducting market research in the Dutch restaurant industry will aid in determining the potential demand for the mobile application among Dutch restaurant owners.

The research question is the central question around which the research is developed. It relates to the research problem, objectives of the study, and determines the methodology and data collection approaches. (GMU Writing Center 2018.) A Clearly defined main research question plays a significant importance for the overall research success (Saunders, Lewis & Thornhill 2009, 42). Objective formulations are leading to develop the main research question as follows:

**What is the potential of a mobile application on the Dutch market in the restaurant industry?**

Research questions have two forms: a central question and associated sub-questions. The central question is a broad question that aims to explore the central concept of phenomenon of the study. (Creswell & Creswell 2017, 129.)

Developing one general research question is an effective starting strategy in the research writing process. However, a general research question lacks key research points, which can be obtained by sub-questions. (Saunders, Lewis & Thornhill 2009, 42-43.) Therefore, to fully answer to central research question, the following sub-questions are composed:

1. SubQ1: How to conduct market research in the restaurant industry?
2. SubQ2: What is the current state of the restaurant industry on the Dutch market?
3. SubQ3: To what extent does the Dutch restaurant industry demand a mobile application that optimizes communication between restaurateurs and customers?

Any research process includes limitations. They should not be a recognition of weakness, but rather as a mature reflection on how to extend and generalize findings. (Saunders, Lewis & Thornhill 2009, 642.)

Constraints and limitations are present in every research project. This study has two main limitations. The first one is the lack of funds. This study was done primarily for academic purposes, and without access to in-depth industry reports written by professional marketing agencies due to budget limitations. Therefore, gaining profound metrics and

materials on the current situation in the Dutch restaurant market was problematic, and the study can only present general information regarding the target market.

The second limitation relates to geography. The study focuses on the Netherlands as a target market for analyzing the introduction of the developing mobile application.

Therefore, this study can be replicated for a restaurant industry of another country; however, the results would likely be very different based on another context.

Although this study has encountered a set of limitations, the objectives of the study could still be achieved.

### 1.3 Theoretical Framework

A theoretical framework guides research (Grant & Osanloo 2014). It acts as an outline and supports the study, providing a structure on how to approach the thesis work as a whole.

The theoretical framework is presented in two parts in chapter 2. The first part defines the concept of market research, examines its role for business use, and outlines the process of market research conduction. This part is designed to answer the first research sub-question: How to conduct market research in the restaurant industry?

Since understanding the current state of the market is an essential part of determining the potential of a mobile application, the second part of Chapter 2 determines the following components that suit the research objectives for analysis: economy overview, market size, market growth, market trends, and competitor analysis.

The purpose of Chapter 2 is to define the theoretical background of market research and to provide an understanding of how market research is conducted, while also describing the components for target market analysis, which will later lay a base for the empirical part of the study.

Later, the empirical part applies the concepts of market research and uses the components of target market analysis to examine the current market situation in the Netherlands. The mobile application design and its functionality are proposed and discussed in Chapter 3, and Chapter 4 fulfills the empirical component by providing an analysis of the current situation in the Dutch restaurant industry.

### 1.4 Research Methodology and Data Collection

There are two main approaches to the theory development process: deductive and inductive. Deductive reasoning has a top-down logic. This method is working from a



general perception of a problem to more specific. Deductive approach starts with the theory, which is then tested through a sequence of propositions. The conclusion is drawn rationally based on a logical combination of premises. (Saunders, Lewis & Thornhill 2016, 144-147.)

On the contrary, inductive reasoning has a bottom-up logic. It starts with the data collection and analysis for future theory development. In this type of reasoning the author must search for premises as evidence of the truth of the conclusion. (Saunders, Lewis & Thornhill 2016, 147.) In this study, the formulation of the main research question results in selecting the deductive approach method.

The next step of a research process, after determining the research approach, is selecting a research method. There are two prominent research methods for collecting data: quantitative and qualitative.

Quantitative research studies the relationship between elements that are measured numerically for statistical analyses. It is predominantly associated with surveys and experimental strategies. Quantitative research techniques of data gathering are surveys, face-to-face or telephone interviews, questionnaires, polls, and observations. As the data are collected in a standardized way, it is crucial that each respondent understands and interprets the questions the same way with other participants. (Saunders, Lewis & Thornhill 2016, 166-168.)

Qualitative research examines participants' meanings and their relations, by applying a variety of data gathering techniques for creating theoretical contribution and conceptual framework. Case study research, action research, ethnography, and narrative research are the principal strategies used in this method. The data collection process is non-standardized; therefore, procedures and questions may change during the process. Case study, action research, grounded theory, and narrative research are the principal strategies used in qualitative research. (Saunders, Lewis & Thornhill 2016, 168-169.)

Qualitative data is more extensive, diverse, and complex than quantitative data since qualitative research depends on non-numerical data and human interaction. (Saunders, Lewis & Thornhill 2016, 568). The aim of this work is to measure the demand among potential users and create an application relevant for the real-life market. The most reliable way of data collection for this research would be through communication and interviews. Therefore, a qualitative research method has been applied.

There are two different types of data sources: secondary and primary. Secondary data are the data that are already published in books, articles, newspapers, online portals, etc.,

whereas primary data are the data originated by the investigator. (Dudovskiy 2020.) The data used in this thesis was obtained from both primary and secondary sources.

As demonstrated in Figure 1, the research applies a deductive approach and is supported by a qualitative research method. The gathered data are collected from primary and secondary sources. Primary data is obtained from interviews that aim to learn about the current industry situation and test customer reactions on the mobile application concept. Secondary data is collected from printed and electronic sources, such as books, research reports, articles, and statistical data.



Figure 1 Research methodology and data collection

## 1.5 Thesis Structure

A clear plan of how to conduct the research lays the foundation for the thesis structure. Therefore, this section provides an outline of the chapters of this paper. Figure 2 illustrates the structure of the thesis.

<b>Chapter 1</b>	• <b>Introduction</b>
<b>Chapter 2</b>	• <b>Market Research Theory</b>
<b>Chapter 3</b>	• <b>Mobile Application Introduction</b>
<b>Chapter 4</b>	• <b>Restaurant Industry</b>
<b>Chapter 5</b>	• <b>Empirical research and Data Analysis</b>
<b>Chapter 6</b>	• <b>Conclusion</b>
<b>Chapter 7</b>	• <b>Summary</b>

Figure 2 Thesis structure

Chapter 1 introduces the thesis background, research questions, and methodology.

Chapter 2 proceeds to outline the theory of market research, including its role, the stages of the research process, and its main components. This chapter allows to learn what market research is and how it is explicitly conducted in the restaurant industry.

Furthermore, Chapter 2 answers the first sub-question. Chapter 3 presents the final mobile application idea concept with its core functions. Chapter 4 then supports the theoretical part by providing empirical findings in the face of various statistical data and country reports to illustrate the current market situation in the Dutch restaurant industry and discusses various factors influencing its current state. Chapter 4 also addresses the second sub-question. Section 5 discusses the process of primary data collection, including study methods, research, and structure of the interviews. Chapter 6 summarizes the findings and lists the conclusions relevant to the empirical part of the thesis. Finally, Chapter 7 compiles the results of the study, recaptures the main research question as well as the sub-questions, and restates the findings of the research.

## 2 MARKET RESEARCH THEORY

### 2.1 Definition of Market Research

The objectives of this research paper are to investigate the market viability of the mobile application business idea in the restaurant industry on the Dutch market. This thesis examines the market research both theoretically and practically.

The theoretical section aims to explore the purpose of market research comprehensively, its main aspects, and the process of its conduct to apply obtained knowledge in practice and to produce realistic predictions about the extent to which the business idea can succeed on the Dutch market.

When viewing the marketing field broadly, many people confuse the term market research with that of marketing research. Although both terms are somewhat similar, a failure to specify characteristics of each term can produce an entirely unpredictable impact on the business life-cycle. Therefore, the first crucial step is to examine the definition of each concept and draw a line between their similarities and differences.

There are multiple definitions of marketing research available in academic literature. The American Marketing Association (AMA), a world-leading community in marketing expertise, provides one of the most precise and widely quoted definitions of marketing research:

*“Marketing research is a function that links the consumer, customer, and public to the marketer through information – information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implication”.*

Meanwhile, the European Society for Opinion and Market Research (ESOMAR), a global association for market research and insights, defines market research as: “a systematic gathering and interpretation of information about individuals or organizations using the statistical and analytical methods and techniques of the applied social sciences to generate insights and to support decision-making”. (ICC/ESOMAR International Code on Market, Opinion and Social Research and Data Analytics.)

Essentially, market research is a process of collecting people's opinions, examining their behaviors, and interpreting this data to guide institutions and businesses in their decision-making process.

Mooi, Sarstedt & Mooi-Reci (2018, 3) bring both definitions even closer by arguing that while the AMA defines marketing research as a function (e.g., at a company's department), the ESOMAR definition focuses on the process itself. Sutherland and Canwell (2008, 46) note that even though both terms are often used synonymously, marketing research is a term that covers a broader context. Marketing research focuses on investigating the four P's of the marketing mix (product, promotion, place, price) and how these elements affect consumer behavior. On the other hand, market research is concerned with investigating a particular market of interest: its political, economic, social, or technological trends, as well as consumer trends and behavioral patterns. Market research is typically more segmented and focuses on exploring only one aspect of the four P's, such as the place. Thus, market research generally covers a narrower scope of interest and is more specific, whereas marketing research is a broader research process and is more generic.

Considering the definitions mentioned above, it can be concluded that marketing research is a broader approach compared with that of market research. This paper will focus on the process itself, and thus, on market research.

The next step is to consider the application of both concepts to this research paper. Using marketing research tools in the scope of this study would mean creating a custom-tailored business strategy for a product, analyzing potential investments and risks, possibilities of success on the market, and creating further ideas for the successful performance of this business plan. However, the aim of this study is not to create a marketing strategy plan for a restaurant product or service, but to explore the viability of the mobile application idea and how relevant it might be for the Dutch restaurant industry considering its current state. That is why selecting market research would allow us to evaluate the on-going trends in the Dutch restaurant market, to analyze relevant factors and to draw conclusions regarding the potential demand for introducing the mobile application in the Netherlands' restaurant industry. Restaurant business owners will later be able to familiarize themselves with the research findings and decide how to use this study's outcome to develop in-depth marketing strategies for their business on the Dutch market, depending on the company's goals.

This section has demonstrated various interpretations of market research. The following section looks at the purpose of market research for business use and considers the attractiveness of its use in the restaurant industry.

## 2.2 Purpose of Market Research

While the previous section defined what market research exactly is, this section examines its purpose and explains the potential benefits of market research for various restaurant businesses.

As suggested by Hague (2006), businesses require information to boost their decision process. Therefore, the purpose of market research is to gather information and data about a particular market, a product, or a service. This information is used in executive decisions and is thus crucial for more robust decision-making.

Philips (Hamersveld & Bont 2007, 37) further characterizes the purpose of market research function 'to help an organization provide reliable evidence which will help managers make better decisions.' From the viewpoint of the industry, market research helps to provide a better understanding of the overall market situation and contributes to better judgments. Hence, the outcome of market analysis is intended to help a firm develop a business strategy, a marketing plan, or a business entry strategy for its product or service. Carefully conducted and interpreted research provides support for the decision-making since it reduces potential risks and contributes to more informed decisions (Birn 2004).

Market research is an essential element in different business decisions (Hague et al. 2013, 24) identify four crucial areas of its application: market assessment, voice-of-the-customer research, new product research and communications, and brand research. Since the purpose of this research is to test the viability of a mobile application in the Dutch restaurant industry, the study will be primarily focused on two elements: market assessment and new product research. The market assessment provides an understanding of the size of a market and overall condition of the industry; it allows businesses to learn more about their market share, consider their competitive advantage, possible opportunities, and risks. New product research is focused on developing new product or service ideas, testing them, and launching on the market. Here market research plays a pivotal role in targeting unmet needs, analyzing customer attitudes to new products, and exploring new ways of communicating with customer base (Hague et al. 2016, 42).

New product research allows for innovation in the industry and is the primary source of the industry's growth and expansion. There are three types of new products: breakthrough, or brand new product, line extension or additional product within an existing line, and product refresh, which is a revitalized version of a current product (Hague et al. 2016, 305). This paper considers mobile application from the perspective of it being a brand-new product for whichever restaurant business that decides to use it.

When it comes to testing the feasibility of mobile application in the restaurant industry, market research is a useful tool to evaluate the market potential for a product because it can help reduce the risks and costs at the development stage. Understanding the current conditions of the market and customers' needs gives the business a better chance of developing a viable product or service. Although market analysis alone is not enough to determine business performance and guarantee the success of a new product, it is necessary for a wide range of business functions. It thus plays a powerful role in any restaurant industry player. Using market analysis from a new product launch will bring valuable insights and highlights that will be specifically relevant to this study.

This section has explored the role of market research and its importance in the decision-making process of the restaurateurs. The following section describes the process of market research and types of data collection.

### 2.3 Process of Market Research

There are two main approaches to conducting market research: primary and secondary research. Primary research is a method where information is obtained from original sources. It is usually done by an organization for its own unique goal and is specific to organizations' requirements. Secondary research does not gather new information but uses data that has already been gathered and analyzed previously. This data often comes from credible sources and can include: company statistics and records, sales reports, industry publications, reports produced by governments, and consulting agencies. (Sarstedt and Mooi, 2019).

Primary and secondary research are further classified into qualitative and quantitative data. Quantitative data are measurable and presented in numeric variables, whereas qualitative data cannot be measured, is more descriptive in nature, and comes in a variety of forms such as words, stories, pictures, or audio. Quantitative data measures the size of the market, market share, buyer purchase frequency, brand awareness, and others. On the other hand, qualitative data is concerned with establishing the meanings consumers attach to products, brands, and marketing ideas. (Hague et al. 2016, 11).

## 2.4 Data Collection Methods

Methods of data collection depend on the research design. If research centers on quantitative data, it can be collected from statistics, surveys, questionnaires, face-to-face, or telephone interviews. Meantime, research-based on qualitative data will extract information from in-depth interviews and observation studies.

This research paper begins with secondary data collection, also known as desk research. Desk research loosely refers to secondary data obtained without fieldwork. Such data typically consists of industry publications and company reports, official government statistics, private archives, and various directories. Search engines like Google or social networking sites like Facebook collect billions of user data daily and offer easy access for researchers to many sources of secondary data, including that provided by organizations and governments (Hague et al. 2016, 317).

Some of the arguments in favor of the desk research are time constraints and cost savings. The use of secondary data massively saves time and money resources for many research questions and objectives (Vartanian 2011). Desk research is far less expensive and time-consuming compared to field research and primary data collection. Many government statistics and industry reports can be obtained at no extra cost and downloaded at one click. Furthermore, secondary sources may contain large samples and can provide more accurate data, especially if taken from government statistics or reports, which are often large scale (Crawford 1997).

Although desk research is efficient and can yield valuable insights, it has its shortcomings. For example, although government statistics are compiled by government officials and are likely to be of high quality, there is still a potential of low reliability of information since there is no real control over the variables and the data quality in secondary research. Wernicke (2014) argues that national statistical agencies do not always provide accurate data even though many are obliged by law to do so. Furthermore, researchers must be aware of source bias when conducting secondary data. Governments and private organizations may have their reasons for inflating the numbers that would suit their agenda and give a more optimistic or pessimistic view (Crawford 1997).

While secondary data about socio-economic and demographic factors of the Dutch restaurant industry in this study are obtained from industry reports and official government statistics, it has its limits. It will only partially cover the research objectives of the subject matter. Government statistics and market reports will allow this research paper to accomplish its aim of providing an overview market analysis of the Dutch restaurant



industry market. To fill in the gaps, we will collect primary data from the restaurateurs in the form of in-depth interviews about their opinions, experiences, and attitudes towards the mobile application concept. These interviews will cover the questions of restaurant owners' business performance, customers' loyalty, and business challenges in the industry. The second part of the interview will outline the idea of the mobile app and collect feedback about new technology, how they perceive its fund and their attitude towards new product launch. Furthermore, using interviews will enhance the validity of this research since it will include the Dutch restaurateurs' own experiences and opinions.

This section has focused on market research processes and types of data collection. It outlined data collection techniques that are used in this paper. The following chapter considers specific components of market analysis in the restaurant industry that are performed to meet the objectives of the paper.

## 2.5 Components of Market Research Analysis

Market analysis has historically prioritized practical studies instead of theory development (Schlegelmilch 2011). Looking at broader industry trends, Burton (2005, 6) argues that "marketing academics more closely identify themselves with marketing practice and applied practitioner-oriented research, rather than theory development." Baumgartner and Pieters (2003) demonstrate that marketing publications focus on application instead of theory development, and Yadav (2009) notes that among the articles published in global marketing journals over the period from 1978 to 2007, the number of theoretical entries has declined.

Therefore, selecting components for analysis depends on the concrete research design and its objectives. Since this research paper aims to explore the potential interest and demand for a mobile application in the Dutch restaurant industry, the market research components section focuses on the elements that were specifically chosen for this study. Taking into consideration the market research used for launching a new product on the market, which in this paper refers to a mobile application, we identify the following factors of interest: economy overview, industry overview, market size, market growth, market trends, and competitor analysis. The components described below are loosely based on David Aaker's market analysis components (Aaker and Moorman 2017).

### 2.5.1 Economy and Industry Overview

Examining the environment of the national economy in the Netherlands is of primary essence for a successful restaurant market analysis. Factors such as GDP, levels of

economic stability, income range, employment rates, and consumer purchasing power have to be taken into account as they have a major impact on the restaurant industry current and future development. A study by Lee and Ha (2012) found a positive correlation between sales at full-service restaurants and GDP cycles between 1976 and 2007, which indicates that restaurant revenues proportionally depend on how stable the economy is in each country.

The more people join the workforce, the higher the household incomes become and the fewer time individuals have to prepare home meals. Given a stable economy, high levels of employment, and good disposable income rates, these factors coupled with the convenience of restaurants will translate into more money spent by citizens at their local establishments.

It is also important to take a deeper look at the restaurant industry's current dynamics and its market position. The current market position of the whole industry will allow us to make predictions about its future trajectory. Therefore, the first task is to create an outline of the general economic situation in the Netherlands and then proceed to give the concrete descriptors of the Dutch restaurant market.

### 2.5.2 Market Size

Without a clear understanding of the market size, it is hard to calculate how much potential a product might have for growth and expansion. This, in turn, matters for businesses since they always seek to increase their revenue and capitalize on market growth.

When examining the market size, two factors need to be addressed: the volume of the market and the value of the market. The market volume refers to the number of customers, while the market value refers to the value of the market itself. This can be expressed in the numbers of consumer purchasing power and how much they spend annually on a particular product or service. For a more detailed analysis, we will also consider market segmentation and assess the individual segments or the subsectors of the foodservice industry. To find whether an industry is expanding, it is vital to consider the industry trends in the past 5-10 years, as well as look at the predictive statistics and forecasts, if those are available.

### 2.5.3 Market Growth

Another important element in market research for potential products is looking at market growth rates. The market growth rate is the speed with which a selected industry is

expanding. Market growth rates can be obtained from government statistics and open data sources and can include numbers about new business openings for selected geographic areas. Monitoring market growth rate is a powerful strategy that allows businesses to identify how long the market will last and how safe it is to invest in the industry.

#### 2.5.4 Market Trends

Market trends indicate the past and current behavior and dominant patterns of the market as well as the consumers. These trends can be short-term, medium-term, and long-term.

These trends can affect the prices of existing products, indicate the demand for a variety or the need to create new products or services. Identifying trends promptly allow businesses to suggest products according to customers' needs.

Current market trends can be presented by collecting information about customers by considering their habits, needs, and want, purchasing behavior, and primary preferences. Observing current market trends in the Dutch foodservice industry will allow us to design a mobile application which will specifically cater to customer needs.

#### 2.5.5 Competitor Analysis

It is essential to look at how many similar mobile application options are available on the market. Since the author's mobile application idea is an original concept, we do not expect to find similar applications operating on the Dutch restaurant market. Therefore, exploring indirect competitor applications with similar designs and similar functionality can still yield valuable insights into how competitors run their businesses. This method will help us assess the strengths and weaknesses of the indirectly competing applications and compare the functionality of the mobile app that we propose with similar products presented on the market. Learning about the shortcomings of the competitors will allow us to shape a product plan to cover these weaknesses and to differentiate itself from similar existing products, thereby making it our application's competitive advantage. The idea behind this is to design a mobile app with functions that are not offered by similar businesses and to address the gaps not yet discussed by indirect competitors. Relevant information will be collected from competitors' PR articles and annual firm reports.

### 2.6 Analysis of Data and Findings

After all necessary data has been gathered, we will proceed with its analysis. Indicators that will be used in organizing the data analysis part of the paper are as follows: the

Netherlands' economy overview, an overview of the Dutch restaurant's industry size and its growth rates, and outlook for the industry for the upcoming years. These findings will then help us illustrate the design for the mobile application concept.

The result of this paper is to conclude data on the Netherlands' economic factors, the conditions of the restaurant industry, its current trends, and specific customer behaviors to answer the research objectives. It will help us determine the extent to which the implementation of the mobile application is a viable and conceivable option in the Dutch restaurant industry.

### 3 MOBILE APPLICATION INTRODUCTION

#### 3.1 Mobile Application Concept

The application is aimed at improving the communication between restaurateurs and their customers by providing benefits for each side. The goal of the application is to reduce the time for both sides: customers and owners by optimizing the process of the service.

Because of the app integration there should be an increase in customer flow, restaurant turnover and development in customer-relations. As for visitors' side, it aims to make the process of going to restaurants smooth and convenient by saving visitors time at all the stages and providing necessary information in one place. Thus, people can save time and money and still have a pleasant experience while eating out.

The application is planned to be available for different operating systems: IOS and Android. By downloading the application users can obtain the information about all the restaurants nearby.

#### 3.2 Target Audience

An accurately defined target audience enables to identify customers' needs and expectations, making sure that the product has a real impact on the market. This stage is crucially important, as it determines all crucial factors in developing an appropriate mobile application. At this stage, the app can undergo significant changes to its concept based on the customer needs. (Liquid State 2017.)

The mobile application aspires to reinforce the communication between restaurants and their guests and offers several advantages for both user groups. Therefore, the target audience of the application can be divided into two main segments: owners and customers. Both groups are considered separately in this research.

The first target audience of the application is restaurant visitors. As the technology strives to improve and facilitate communication between restaurateurs and their guests, the prime focus is on local people, who visit cafes and bars in the Netherlands regularly. Local people, unlike tourists, are more likely to use the application, as it implies a long-term strategy to obtain the benefits.

Another target audience of the app is restaurant owners. There are certain types of food enterprises suitable for this technology. First, the application will be targeted to restaurants in a certain geographical area. In such cities as Amsterdam, Rotterdam and The Hague are selected for the research area and app introduction, due to the highest number of foodservice locations there. Secondly, there are certain types of restaurant service type applicable for mobile application integration.

There are five different types of restaurant services: waiter service, Chinese banquet, buffet, self-service, semi-self-service (Unilever, 2020). The type of service in a restaurant defines whether the app can be integrated into the business operation or not. This app is focused on the restaurants with the waiter service type, as one of its main goals is service process optimization.

The optimization is achieved by transferring the order payment process online. Thus, visitors no longer need to wait for the waiter to come to bring their bill since the order can be paid online via the application. This feature reduces the number of interactions between a waiter and client, thus speeding up the entire service process. As a result, the restaurant minimizes the amount of time spent per customer unit and increases its turnover.

The application functionality will not be suitable for establishments with other types of guests' service, to banquet or self-service, since their service process has already been maximally reduced. Therefore, service optimization through the application will not be beneficial for them. That is why, full-service types of enterprises like restaurants, cafes, and bars are the potential target audience for the application.

To summarize, there are two main segments for the application: visitors and restaurant owners. The key characteristics for the user are permanent residence in the Netherlands. As for the owners' side, a restaurant should be in Amsterdam, Rotterdam, or The Hague and have a full-service type of concept.

### 3.3 Mobile Functionality

The mobile application makes the process of going to restaurants smoother and more convenient. It aims to accompany a person from the first stage of place selection to the last one – of order payment. There are multiple functions available for restaurant visitors. Through the application users can select places, read comments, book a table, pre-order food, earn and exchange bonuses, pay for their meal, and leave cashless tips.

The mobile application strives to make the user experience more personal. It is achieved

by a combination of factors such as demographics and behaviors that take place in the application. Over time, the application's function of 'Place selection' will offer new places to go to, based on a user's visit history and preferences. It makes the eating out experience completely tailored to the individual. Other functions like self-payment and cashless tips enable visitors to save their time, as they do not need to wait for a waiter to come. Furthermore, the feature of bonuses and promotion enables users to save money by exchanging accumulated bonuses for new orders. The mobile application functions for restaurant visitors can be seen in more details in Figure 3 below.

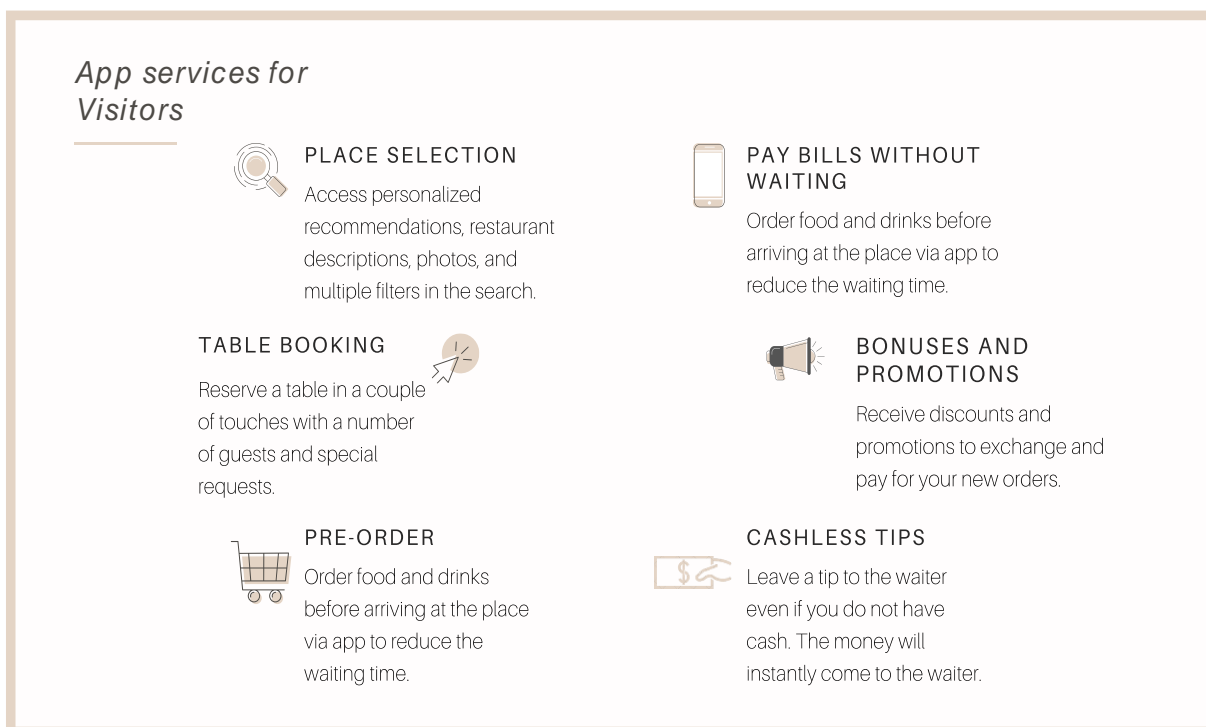


Figure 3 Application functions visitors side

As for the restaurateurs' side, the mobile application aims to optimize business processes and improve communication with guests. It tracks the restaurant performance, boosts customers' loyalty, motivates employees, and obtains instant feedback from visitors. The application makes interaction with guests easy and efficient. The end goal of the application for restaurant owners is to increase turnover, improve communication with guests and to create an additional promotional channel for reaching new customers. The Figure 4 shows the functions available for restaurant owners.



Figure 4 Application functions restaurateurs side

### 3.4 Mobile Application Key Features

In the process of developing a mobile application, it is essential to consider the values it will bring for its users. Therefore, this sub-chapter aims to introduce the distinctive features that the mobile application provides.

#### 3.4.1 Self-Payment

According to Statista, there are 3.4 billion smartphone users worldwide (Statista 2020). This high number demonstrates how technology-dependent people are nowadays. Paying for a meal through the mobile application at any time moment is a practical and convenient tool since everyone keeps their smartphone usually at hand. The additional advantage is that customers do not need to wait for a waiter to come and bring a bill. Instead, they can pay for it via their phones once they have finished and leave.

The feature is also useful for restaurant owners. It increases customer turnover and reduces the costs spent on staff and eliminates the risks of missing the payments. Therefore, this application function is a win-win approach for both restaurants and their visitors. It reduces the overall waiting time for both sides and eliminates the waiting lines during peak hours.



### 3.4.2 Food Pre-order

Another critical function of the mobile application is meal pre-order. It allows restaurant visitors to order a meal via the application for a specific time and come once the dish is ready. It makes the process of eating out convenient and easy. It is especially handy for working people who have limited time frames during lunchtime but still want to have quality food in a short amount of time.

It is also handy for the restaurateurs since they can accept or decline the order as well as receive the payment before preparing the order.

### 3.4.3 POS System Integration

The point of sale (POS) systems are widely used in retail. It is a network where a customer pays in exchange for a product or service. The system plays a central role in business processes by merging payment transactions, inventory follows up and customer management processes. The POS system is actively used in Dutch restaurants.

The mobile application will connect with the current point of sales in a restaurant. Thereby, all the technologies will be integrated, ensuring smooth payment and data exchange process. For instance, when a customer selects the 'pre-order meal' option and pays for it, the information about the order is instantly accessed on the kitchen and will be in the process of being made.

## 3.5 Mobile Interaction Scheme

The mobile application acts as a digital communication platform between the restaurant and its visitors, combining various functions for both sides. It is necessary to explain the mobile application's functionality and technical aspects to fully understand the idea behind its concept. The Figure 5 below illustrates the integration process. Firstly, the application can be downloaded from the App Store and Google Play. Upon opening, users can log in to their profile by verifying their user data. The application will connect to the cloud service, where user data is stored including emails and hashed passwords. Cloud service is a cloud storage with information about restaurants, user data and the history of their orders. This cloud stores all data that is used in the system, as well as information about user purchases. Once a new order is confirmed, it is saved and is sent to the cloud service, which automatically forwards the order to the restaurant POS system, where kitchen workers confirm it and begin to prepare the order. Since the cloud service not only stores information about the users' orders but also their personal information such as

gender and age, this data can be used for marketing purposes such as positioning and targeting. Restaurant owners can access the data through a web interface in a browser, where all analytical data about customers, their preferences, order history and average age are stored.

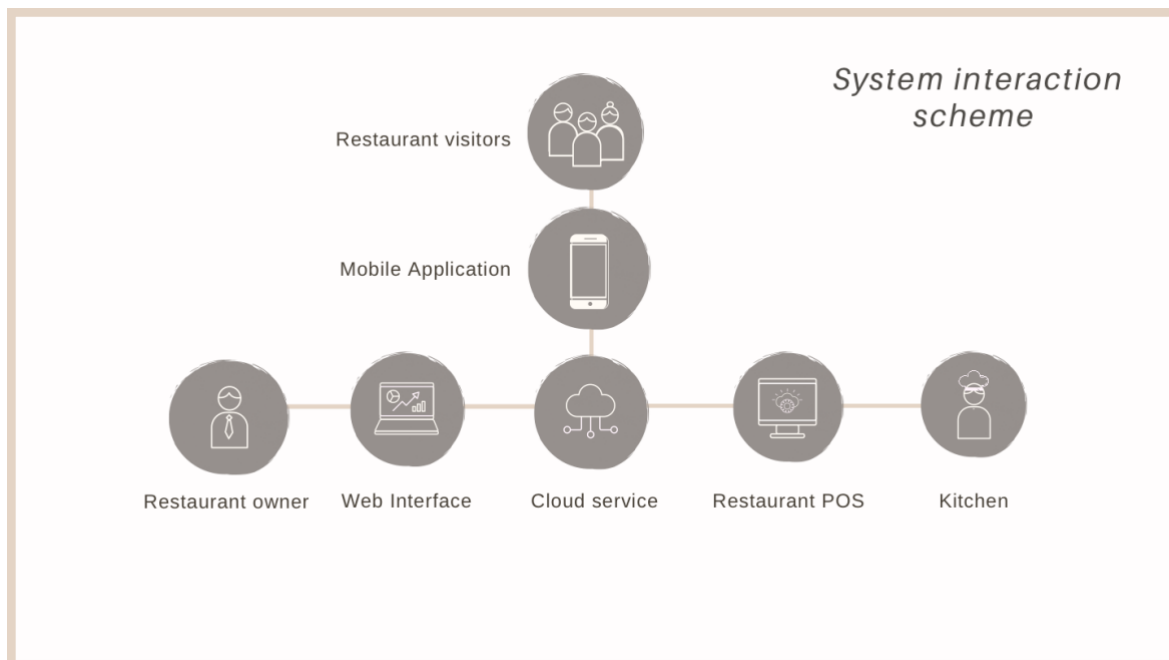


Figure 5 Integration scheme

### 3.6 Mobile Application Visualization

On the main screen of the application, image 1, the user sees a map with the restaurants connected to the system. A section with current offers is shown below. There users can see different promotions. This section helps customers to find good deals, and restaurateurs to promote their place by attracting new customers. Next section is the restaurants located near the user, which helps the customer to find out about new establishments close by.

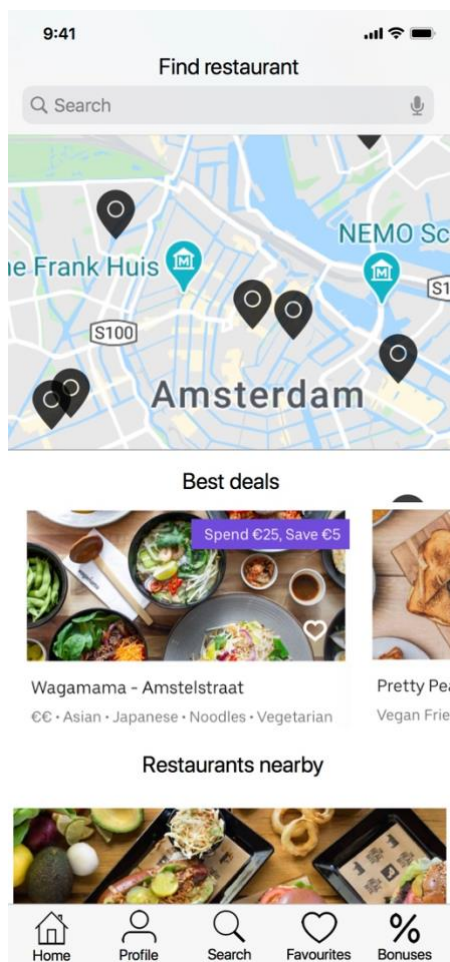


Image 1 Mobile application main screen

At the bottom of the screen is the main application menu, consisting of five buttons:

- Home  
When the user clicks on the home button, the main screen of the application is shown
- Profile  
In the profile section, a client can see personal information: the orders history, default credit card for payment as well as personalized offers from restaurants.
- Search  
This tab is used for searching for new places with filters.
- Favorites  
Here, the user can save favorite places to stay tuned for updates and new offers.
- Bonuses  
This section shows the accumulated bonuses that the user can use in the restaurant for the next visits.

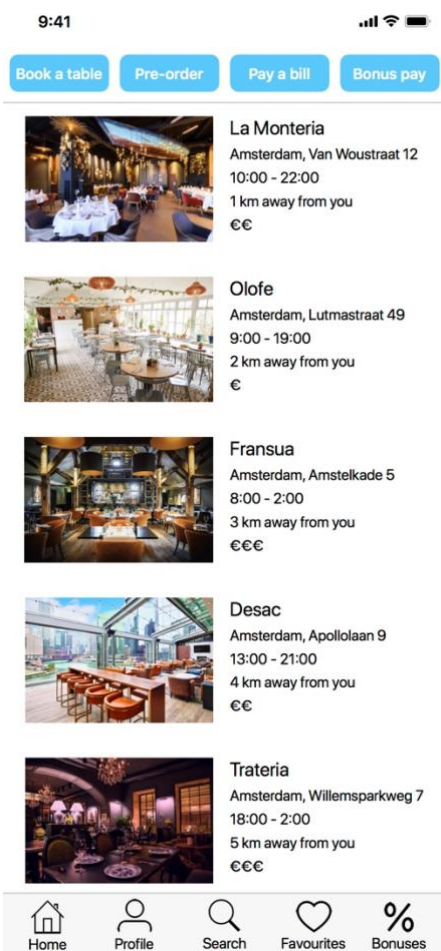


Image 2 Search screen

The second screenshot shows how the search section works. Here the user can see restaurants sorted by distance, so the nearest place can be easily found. Besides, the restaurants can be filtered by various other aspects, such as:

- **Book a table**  
A user can see all the restaurants in which he can reserve a table online by clicking a button.
- **Pre-order**  
This feature selects the places where a user able to pre-order food for a certain time.
- **Pay a bill**  
This filter shows all the restaurants, which have a self-payment service. This filter can be especially useful when a visitor has a limited amount of time for eating or does not want to be served by a waiter.
- **Bonus pay**

This search filter shows restaurants where the user can pay with accumulated bonuses.

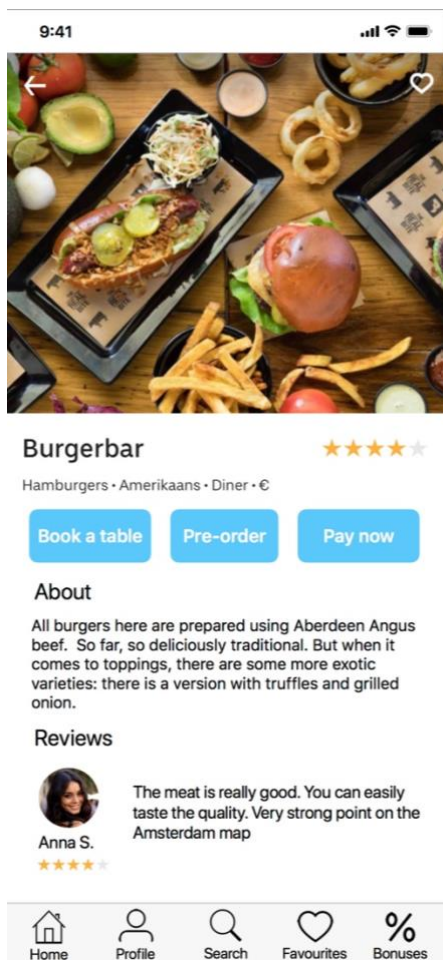


Image 3 Restaurant profile screen

While selecting the restaurant, the user can check its description, rating, and available features. This page also includes the type of the cuisine, price category, and reviews from previous visitors.

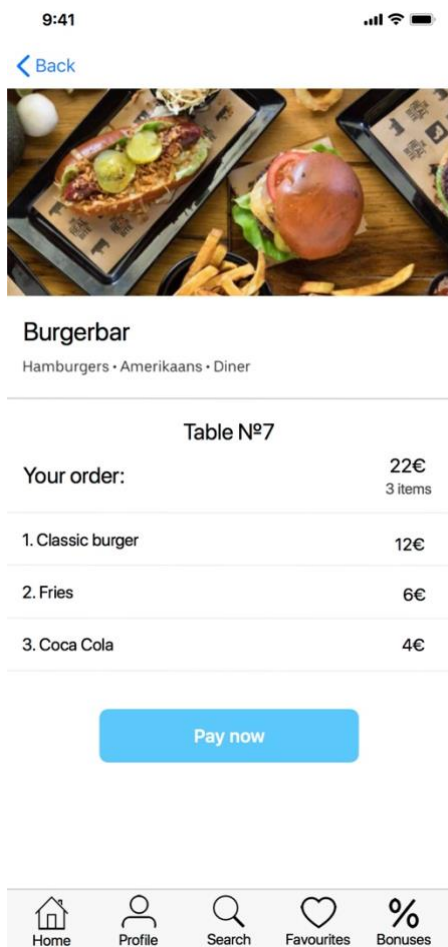


Image 4 Payment screen

This application accompanies the user at all stages of eating out. Once a customer has finished a meal at the restaurant, they can pay for the order through the app. On the payment screen the user sees the name of the place, their table number, and a list of ordered dishes with prices. The blue button allows the person to make an online payment within the application. This feature allows the visitor to save time without waiting for the waiter.

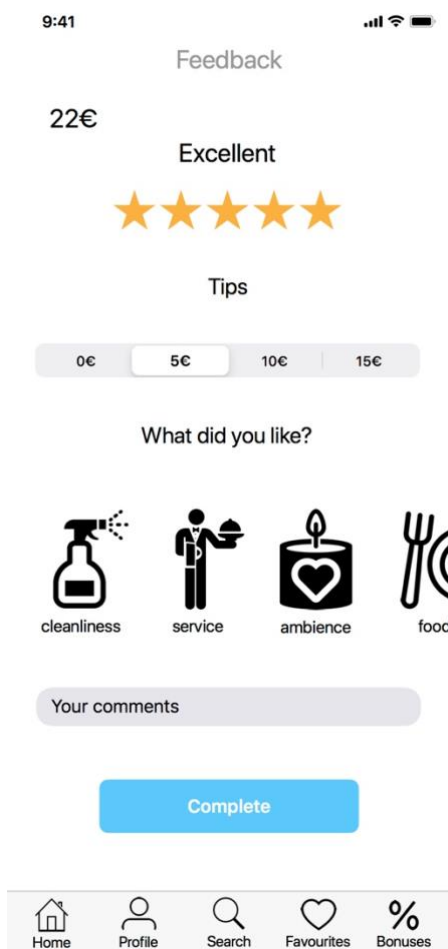


Image 5 Feedback screen

On this page, the customer can leave feedback about the service and place. After the payment is accepted, the user can leave cashless tips. In the feedback section the visitor can state the attributes about the place or order that they liked the most or leave other comments.

### 3.7 Mobile Application Limitations

After examining the mobile application idea and functionality, it is also essential to have a look at the possible limitations of this concept. The first limitation is related to the introduction to the specific geographic area. Developing a technological product for a particular market makes the product customized and targeted for the specific needs and wants of the target users. In this way, the empirical findings of the research have an impact on the development of the mobile application features. After conducting the research on the Dutch market, it was noticed that the restaurant owners in the Netherlands prefer new business devices or applications to be integrated into the existing POS systems. For this reason, it was decided to integrate the mobile application with a

current restaurant POS system. Thus, the original application concept has undergone changes according to the need of the Dutch market. As a result, this will affect the presentation and integration of the application in other cities and countries.

Moreover, the empirical findings for this concept cannot be generalized and applied to different mobile application concepts nor other geographic areas. Therefore, the practical side of the research, as well as instructions and recommendations do not apply to various industries and countries.

Another limitation of the mobile application is the focus on the full-service types of food enterprises. Since one of the primary purposes of the application - service process optimization, predominantly such kinds of restaurants, will benefit from integration with the application. Thus, this technology will be focused primarily on such foodservice concepts as restaurants, cafes, and bars.

Finally, another obstacle is the product life cycle. Every new product has a life cycle which starts once the product is introduced to the market and ends once it is discontinued. As the technologies are rapidly advancing and replacing each other, there are certain limitations imposed on the mobile application's life cycle. Therefore, it is difficult to predict how long this concept will stay relevant for the Dutch restaurant market.



## 4 THE RESTAURANT INDUSTRY

### 4.1 The Restaurant Industry Overview

The hospitality industry consists of three main categories: food and beverage, accommodation and lodging, and travel and tourism (Reynolds 2017). The food and beverage is the largest sector, formed from high-end restaurants, bars, and fast-food eateries; and ranges from dining on the premises to off the premises service (takeaway and food delivery) (Reynolds 2017; Jagels 2007, 527; Feinberg 2016). The following chapter primarily focuses on the restaurant segment of the food and beverage industry.

There are numerous economic and financial factors that have a significant impact on the restaurant market and the hospitality's industry growth. The country's economic indicators such as income levels, GDP growth, rising healthcare and education costs will directly affect future development of the industry. (KPMG 2016, 2).

Another aspect that heavily influences the restaurant business is technology. As technologies are rapidly integrating into various aspects of people's daily lives, they also influence and shape the consumer behavior. When it comes to their food choices, modern consumers seek convenience coupled with unique experience. Both competitive and technological pressures pose several threats to the management of foodservice enterprises, which makes the current foodservice industry dependent on constant advancement of their technological aspects to provide a more efficient and impeccable customer service.

As for the social factors, reduction of work hours, increase in the duration of annual vacations and a desire to achieve a harmonious work-life balance among the population, has led to an increase in the spare time available. The tendency of work-life balance along with the rising living standards increases people's levels of education, cultural awareness, and aesthetic needs and results in an influx of new potential customers for the hospitality industry. (Pestle Analysis 2015.)

### 4.2 Dutch Market

The Dutch market was selected for the research and potential mobile application introduction due to several factors. First, its economy is one of the strongest in the world. It takes 17<sup>th</sup> place among all the countries, according to the International Monetary Fund and the World Bank. Different factors contribute to the prosperity of the Dutch economy. The Netherlands has highly developed economic sectors varying from natural gas, to food products and to restaurants, that support and strengthen the country's global reputation.

In 2018, the GDP per capita in the Netherlands was estimated to be \$53,024, which makes it one of the highest-earning nations worldwide (Statistics times 2020).

The robust economic performance of the Netherlands has a positive effect on the development of the foodservice industry, since more people can eat out, thus also providing a steady growth for the restaurant industry.

Another aspect influencing the choice of the market is government regulations. Dutch government encourages innovation, startups, and companies through numerous financial supports for instance, tax benefits, grants and innovation credits. The innovation sector in the Netherlands is among the best in the world, and the government consistently invests in it to strengthen its position (Global Innovation Index 2019).

Moreover, the Netherlands has world-class digital infrastructure. Dutch consumers desire to embrace new digital applications (Deloitte 2014). The country applies different digital tools for improving different spheres of life, such as transportation, healthcare, medicine, food supply, education, and services (Ministry of Economic Affairs and Climate Policy 2018). The country desires to strengthen its digital integration to peoples every day's life, which indicates a favorable environment for the introduction of new mobile technologies.

The combination of the above-mentioned factors makes the Netherlands potentially favorable for the introduction of new mobile technology. Another aspect influencing the choice of this market is the author's experience living in the country and having established wide-ranging connections.

After the initial market selection, it is crucial to conduct a realistic, data-driven research on whether the mobile application concept can succeed in the marketplace. In this regard, conducting market research helps to minimize risks of investments and strengthen the business positions of the product (Mooi et al., 2018, 4). Therefore, this chapter serves the purpose of examining the Dutch restaurant industry in-depth to determine whether the mobile application idea is viable for the market. This is done by examining the country's current economic situation and learning the industry's future trends.

#### 4.2.1 Dutch Economy

The national economy has a significant influence on the development of the restaurant industry. Therefore, factors such as levels of economic stability, GDP, employment rates, and consumers' purchasing power are considered in this subchapter.

The Dutch economy is one of the strongest economies in the world. According to the Heritage Foundation (2019, 55), there are many factors contributing to its exponential

development, for instance: it is strategic location, the stability of the political and macroeconomic environments, a well-educated labor force and a highly developed financial sector.

The restaurant industry thrives when the economy grows, and vice versa - it suffers when the economy goes down (Ally Schmidt 2017). The Gross Domestic Product (GDP) is an effective indicator for understanding macroeconomic trends and their impact on the restaurant industry. Furthermore, it displays the size and health of the economy. Overall, GDP can be defined as the market value of all services and goods produced over a given period in a country.

The statistical data from 2019 in Table 1 demonstrates the key data of the Dutch Economy between 2016 and 2019 and gives predictions for 2020. As it can be seen in the table, between 2016 and 2019 the country's GDP was on the rise and unemployment rate decreased by almost half. However, the inflation (CPI) increased by 2.3 and reached its peak of 2.6 in 2019.

As for 2020, USDA Foreign Agricultural Service predicts a slight drop of the Dutch GDP in 2020 compared to previous booming years. The unemployment rate is expected to somewhat rise, reaching 3.6 percent, while the inflation will drop considerably to 1.3 per cent.

Table 1 Key Data Dutch Economy (USDA Foreign Agricultural Service 2019)

	2016	2017	2018	2019
Economic Growth, percentage	2.2	2.9	2.7	1.7
Unemployment, percentage	6.0	4.9	3.9	3.4
Inflation (CPI), percentage	0.3	1.3	1.6	2.6
GDP (billion USD)	833	867	910	948

According to the USDA Foreign Agricultural Service (2017, 2), after the 2008 financial crisis, the Dutch government has implemented several important policy reforms in vital areas of the labor market, pension system, housing sector, and health care. As a result, the Dutch economy has strengthened considerably since 2013.

Since the Dutch economy is recovering, the disposable income levels and the consumer confidence are also improving. It positively influences peoples' standards of living by enabling them to enjoy various benefits such as eating out several times per month and traveling to other cities. According to the statistics, a Dutch person spent 1163 euros on out-of-home food consumption in 2018 on average (Table 2). This number rose steadily between 2014 and 2018. Over the period of four years, a single person's spending on eating out rose by 128 euros. This rise corresponds with the increase in the number of transactions per person and spending per transaction proving that the Dutch consumers are eating out again.

Table 2 Per capita expenditure on out-of-home food consumption in the Netherland (Statista 2018)

	2013	2014	2015	2016	2017	2018
Consumption	1,043	1,035	1,054	1,078	1,115	1,163

The growth of the economy influences people's purchasing power by raising their demands for out of home food options. An increase in the demand for eating out on the consumer side positively affects the development and expansion of the restaurant industry. As K. Marx and F. Engels (1961, 209) wrote: "demand determines supply, just as supply determines demand".

The rising demand for eating out in the Netherlands consequently has resulted in the rising number of restaurants opened over the last couple of years. Figure 6 shows that in 2016 there were 14,615 business units in the Netherlands. Within two years the number of restaurants grew by 915, reaching its peak with a total number of 15,530 outlets. This rapid expansion in the restaurant business is associated with a major rise in discretionary spending and improvements in personal incomes during the economic boom (Trading Economics 2018).

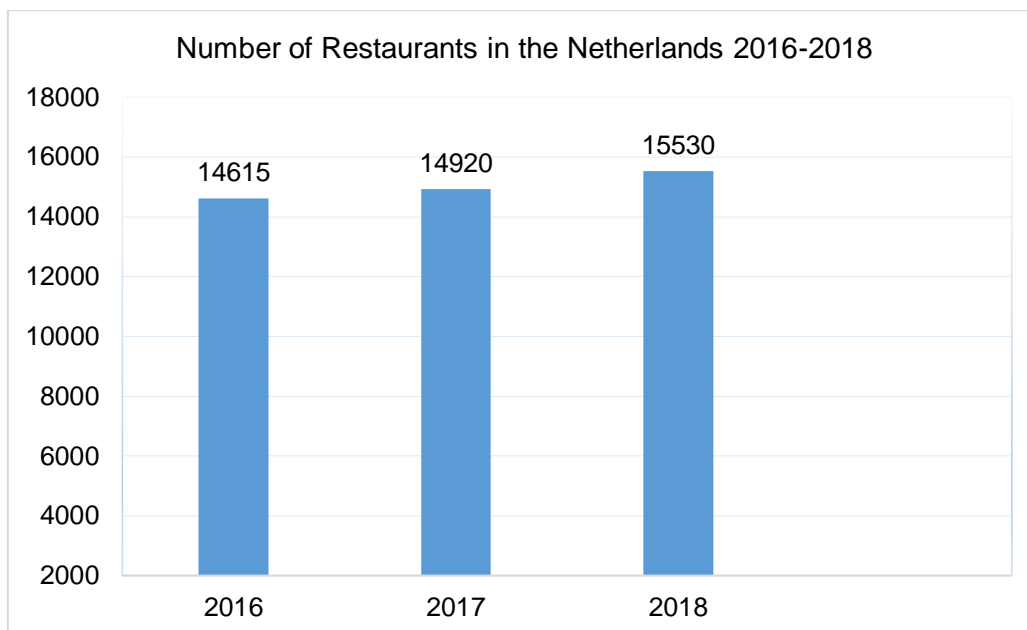


Figure 6 Restaurant and catering industry in the Netherlands (Statista 2018)

Revenue growth is essential for the restaurant industry as it serves as a reliable indicator of industry expansion. Figure 7 demonstrates the annual earnings of the Dutch restaurant industry from 2010 to 2018. The revenue began to level up in 2014, after the economic downturn which lasted until 2013. A significant increase in revenue occurred between 2015 and 2018. Over this period, the revenue had increased by 773 million euros, reaching 5.884 million by the end of 2018. This growing trend illustrates a significant expansion of the restaurant industry in the Dutch market in the years 2014 to 2018.

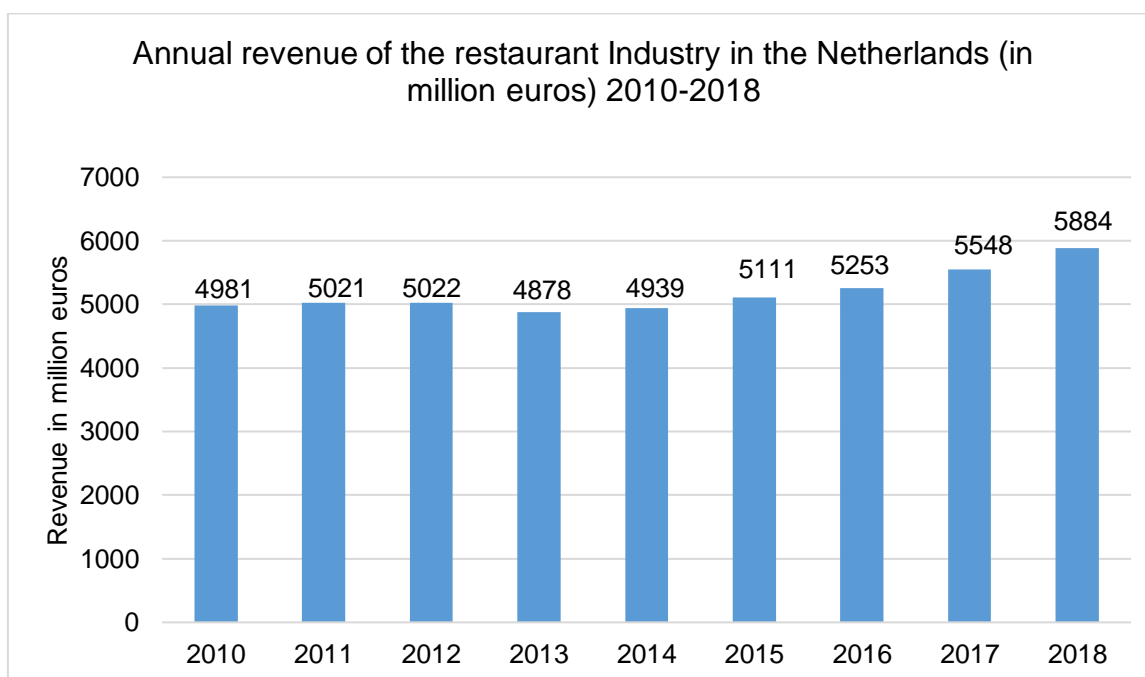


Figure 7 Annual revenue of the restaurant Industry in the Netherlands 2010- 2018  
(Statista 2019)

Another factor indicating the restaurant industry's sustainable development is the number of people employed in this sector. According to the statistics from the Figure 8, the number of people working in the restaurant sector in Amsterdam has accounted for 24,642 in 2010. In the next 8 years, the labor market in this industry has expanded by 30%, reaching 35,632 working places in 2018. This surge in employment rate indicates an increased demand for restaurant services in the country.

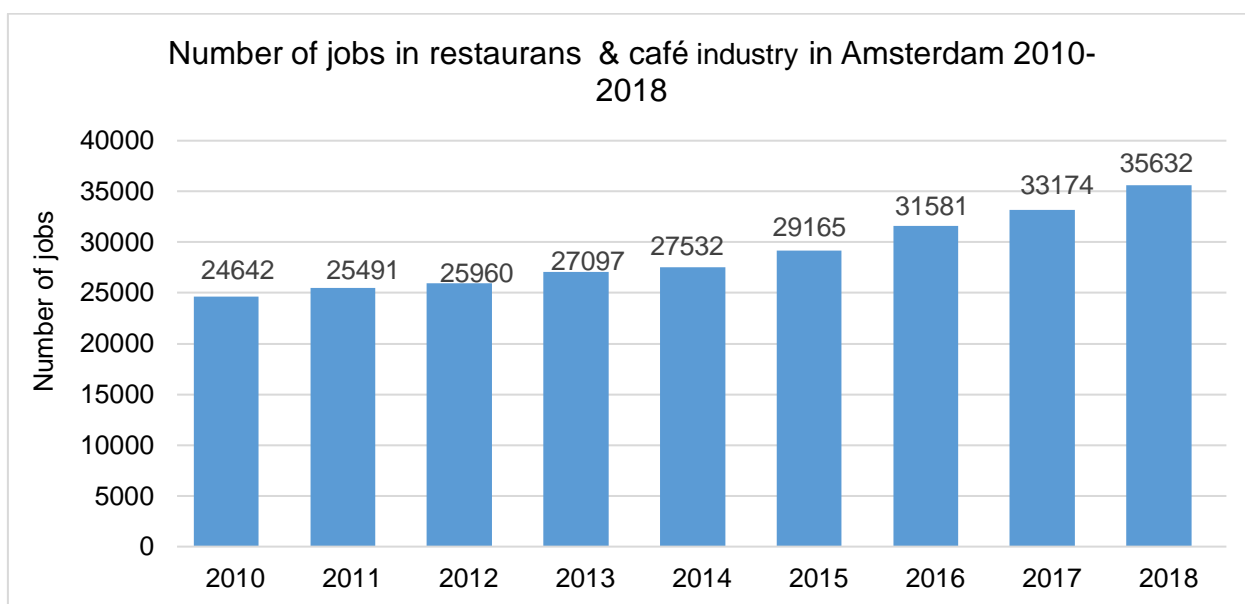


Figure 8 Restaurant and catering industry in the Netherlands, from 2010 to 2018 (Statista 2019)

In 2018, the turnover of the Dutch Foodservice market has reached 19.9 billion euros. After a decade of economic decline brought by the aftermath of the 2008 financial crisis, the position of the Foodservice industry in the Netherlands is getting stronger. Since 2014 the Dutch Foodservice market has continued to recover and has reported an increase in sales for the fourth consecutive year. This increase in sales is ensured by the rapid growth of the national economy and a boost in discretionary income.

Table 3 Turnover of the out-of-home food market in the Netherlands from 2013 to 2018 (in billion euros) (Statista 2019)

	2013	2014	2015	2016	2017	2018
Turnover	17,5	17,42	17,82	18,31	19,05	19,99

In the meantime, the future of the Foodservice in the Netherlands looks bright and is expected to continue growing at about 4 percent annually until 2021 (USDA Foreign Agricultural Service 2017).

#### 4.2.2 Dutch Foodservice Market Analysis

The Foodservice industry in the Netherlands consists of several sub-sectors: full-service restaurants, cafés/bars, fast-food outlets, self-serve cafeterias, home delivery and takeaway, and street stalls (USDA Foreign Agricultural Service 2017).

Full-service restaurants - are establishments that offer fine dining with diverse food options, beverages, and table service, where ordered dishes are served directly to the customers' table. The focus tends to be on food instead of drinks. Highly trained chefs, experienced servants and an upscale atmosphere are the common characteristics of this type of enterprise. A restaurant can offer different food serving options: a la carte, ordering individual dishes, or an all-you-can-eat buffet.

Cafes/bars - is a food establishment that sells small meals and drinks, both alcoholic and non-alcoholic. Although these institutions have various food options (light snacks and full-meal courses), the focus stays on drinks. These establishments are usually conceptualized as bars, cafes, pubs, smoothie/juice bars or coffee specialty shops.

Fast food outlets - are defined as ready-to-eat outlets, where food such as hamburgers, pizza, French fries, and soft drinks is served. These outlets often provide a separate packaging of each meal item, a counter service, as well as young and unskilled labor force.

Self-serving cafeterias - are establishments with no or limited service options. Food options are placed on a counter. Customers then select an item and pay for it at a separate checkout station or at a cashier.

Home delivery or takeaway - these are catering units without actual facilities for food consumption. Therefore, ordered food is either delivered or should be picked up by the consumer.

Street stalls, kiosks - are typically moveable, small food stands that provide limited and low-price product options. These outlets are usually specialized in drinks or snacks.

Table 4 Foodservice Sales by Sub- sector, in million USD (USDA Foreign Agricultural Service 2017)

	2011	2012	2013	2014	2015	2016
Full-Service Restaurants	4,582	4,663	4,746	4,858	5,096	5,335
Cafés/Bars	2,568	2,574	2,571	2,585	2,666	2,806
Fast Food	3,287	3,318	3,402	3,481	3,600	3,693
Self-serving cafeterias	686	703	738	756	775	706
Home delivery and takeaway	345	362	383	417	483	542
Street stalls, kiosks	245	251	253	255	259	267

<sup>1</sup> 1\$= 0.85 €

Since introducing a mobile application aims to optimize the business process of the full-service types of restaurants, the research primarily focuses on the sub-sectors like restaurants, cafes, and bars. To measure the performance of the sectors on the Dutch market, the statistical data is collected and examined.

Furthermore, the estimated future growth rates of each food service sub-sector are provided in Table 8. Full-service restaurants and cafes/bars are expected to remain popular and are predicted to continue growing steadily among the Dutch consumers in the upcoming years. Home delivery and takeaway sub-sectors are also predicted to experience significant growth rates, accounting for 8.3 percent in 2020 and 7.7 percent in 2021.



Table 5 Expected Growth Rates by Sub-Sector, in Percentage (USDA Foreign Agricultural Service 2017)

	Full-Service Restaurants	Cafés/Bars	Fast Food	Self-serving cafeterias	Home delivery or takeaway	Street stalls, kiosks
2020	3.6	4.4	2.6	4.0	8.3	2.6
2021	3.6	4.2	2.7	4.4	7.7	3.1

#### 4.2.3 Research Area

After analyzing the restaurant industry environment in the Netherlands overall, it is important to narrow down the research area, where the restaurants are concentrated the most. Identifying specific areas allows us to narrow the research scope and select future cities for introduction of the mobile application.

As seen in Figure 9, the hospitality sector is well-developed in several Dutch cities. The most saturated area with hotels, restaurants, and cafes, is Amsterdam. The city has 4,551 various locations of hotels, restaurants, and cafes. The second city with a thriving hospitality industry is Rotterdam. Although the number of outlets in Rotterdam is 1,998, which is around 2.3 times less compared to Amsterdam, Rotterdam still plays an important role for the Dutch market. The third place belongs to The Hague with the 1,904 hotels, restaurants, and cafes business units. Therefore, this research will mainly focus on three locations: Amsterdam, Rotterdam, and The Hague.

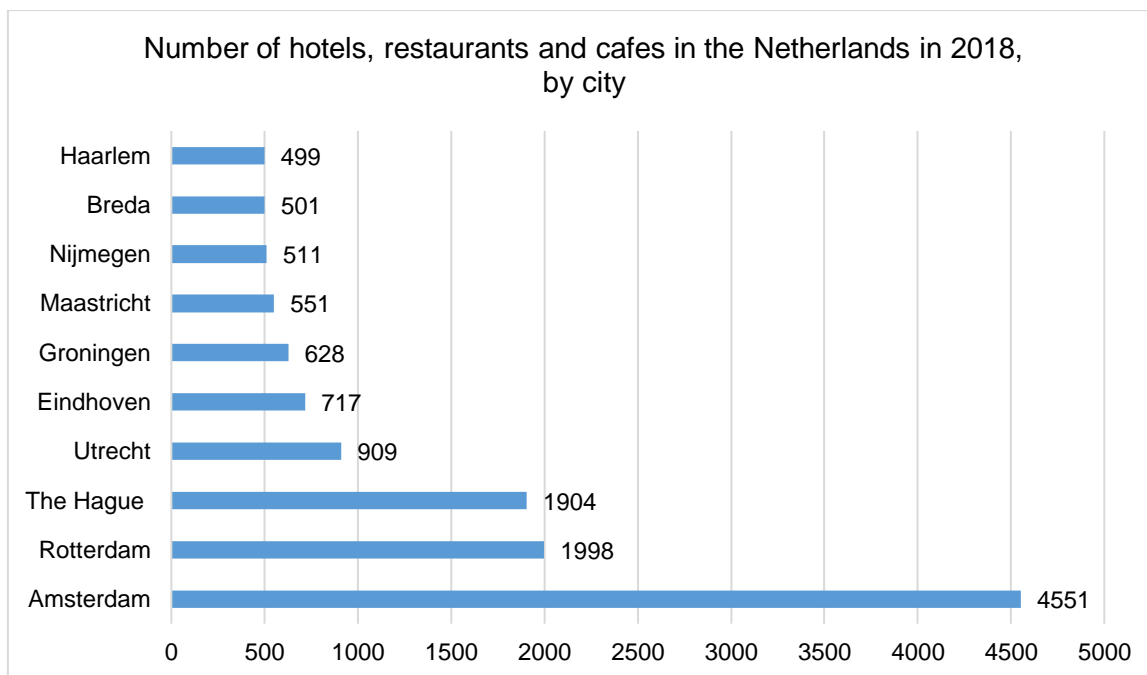


Figure 9 Number of hotels, restaurant, and cafes in the Netherlands in 2018 (Statista 2018)

### 4.3 Restaurant Industry Key Trends

This section aims to detect trends that influence the Foodservice industry. Factors influencing the restaurant business are considered two sides: the customer side and the restaurant owner side.

Firstly, we will look at the industry trends from the customer side. At the heart of the consumer trends in the food service sector is a fast-changing demographic. The eating culture is transforming due to the needs driven by the generations of Millennials and Centennials, who want convenience, transparency, and experience in their food options. People born from 1997 onwards, are grown enough to make their own decisions regarding what and where to eat. The Centennials generation will demand the integration of high-tech services, special visuals, and louder music to obtain valuable experience. (KPMG 2016). To grow their target audience, the restaurateurs need to modify their business approach and introduce innovative strategies to compete in a fast-changing environment.

Another factor affecting the industry is time consciousness. People are experiencing time scarcity as they are busy at work and universities, with sports, hobbies, and other social engagements. Many people do not have enough time for cooking, which consequently results in an increasing demand for convenience (Pinckaers 2017). Therefore, the

traditional way of eating at home is slowly transforming into eating while working, traveling or meeting with friends. Therefore, restaurateurs must adapt their business models to the desires of the consumers, making their service easy and convenient.

Furthermore, another factor driving the need for convenience is consumers' expectations about making purchases anytime and anywhere, which challenges the Foodservice companies. To stay relevant on the market and to grow their revenue, restaurants have to offer services that meet customers' demands of purchasing anytime and anywhere. Thus, the restaurant owners have to upgrade their business models with food delivery and takeaway options to provide more efficient and convenient customer service; and many have already started to do so.

Another major consumer trend is technological advancements. Populations are getting more accustomed to the benefits and convenience created by technologies in many aspects of life. The restaurant industry has to keep up with technological advances in order to satisfy their clients' demands. That is why the foodservice chains are implementing order, booking and payment options to provide convenience for their customers. According to the National Restaurant Association research, 76% consumers say that restaurant technologies improve the overall convenience (National Restaurant Association 2016).

Digital technology has already reshaped the markets in various ways. Smartphones are now integrated into all activities of human daily lives and today's consumers are making decisions online. In the Netherlands, it is quite common to combine an experience of eating out with smartphone usage (Pinckaers 2017). Individuals will typically check out a restaurant's website, their photos, and reviews before going there in person. Furthermore, consumers prefer online communication when ordering food or booking a table instead of ringing up a restaurant or going there in person.

Social media is another trend that influences the foodservice industry. Modern consumers are always connected and have high expectations of the quality, convenience, and sustainability of the service they receive. People interact with each other and share their experiences, exchange opinions about the atmosphere, the service, the price, and the quality of an enterprise, supporting their observations with photos and comments. Moreover, today's consumers rely on reviews before deciding and do not trust traditional media anymore (KPMG 2016). The Dutch consumers use online platforms such as iens.nl, Google Maps and eetnu.nl to share their experiences as well as reading other people's feedback while choosing a place for eating out.

Secondly, it is important to look at the trends from the restaurant owner's side. Many large supermarket chains provide a growing selection of prepared meal options while fast-food chains offer convenient food delivery options. This makes the quality of food that can be eaten at home very high. Therefore, to stay in the game, the restaurant owners can use any of the two approaches. The first one is to reduce the costs through staff reduction and streamlined processes through technology integration into daily operations. The second approach is to shift the focus on sustainability, locally produced foods, and experience customization. (JLL Foodservice Consulting Team 2019, 52.)

Aside from the intensive competition of food suppliers, another factor shaping the industry from the restaurant owner perspective is once again technological innovation. It is estimated that tech advancements will automate traditional operational tasks such as inventory management, taxes, scheduling and payroll (National Restaurant Association, 2019). Therefore, restaurant owners should continue adopting a new business approach and educating their staff on the use of various digital technologies and equipment.

According to the National Restaurant Association study (2020), around 80 percent of restaurants have the POS (Point of Sale) systems integrated into their business processes. This system is a management tool, which helps restaurant owners to track business performance and streamline the processes. Technical integration into business involves two significant objectives that restaurant owners aim to achieve. The first one is to optimize operations by improving service efficiency, boosting staff productivity, and reducing waste. The second objective is to encourage visitors' experience and thus enhance their loyalty and satisfaction. These activities ultimately lead to an increase in revenues and save costs for restaurants. (Starfleet Research 2018.) Therefore, these two objectives must be considered when creating any technological solutions.

The demographic factor is also shaping the restaurant industry not only from the consumer side, but also from the restaurant owner side. Rapidly changing desires of the media-savvy Millennials who seek new experience and convenience, as well as an increasing number of Generation Z customers force restaurateurs to improve business strategies to stay relevant on the market (KPMG 2016 3). Thus, there is an unconditional need for restaurants to modify their business strategies by introducing high-tech services, outstanding visuals, loud music, and an enhanced experience.

#### 4.4 Competitor Analysis

Competitor analysis allows for a better understanding of the market environment, helps to find a product niche, and identifies a direction for growth. Studying companies' features

and their development enables us to determine new opportunities for the market. It helps to set the right vector for introducing the new product to the market, minimize its risks, and find a competitive advantage. (Birov 2015.)

Since the author's mobile application concept does not have an equivalent operating on the Dutch restaurant industry, other mobile applications working for the same target audiences will be considered. The following applications are deemed to be indirect competitors since they offer different services but operate in the same industry.

Indirect competitors to the author's concept are food delivery applications. Several of them operate on the Dutch market: Deliveroo, Thuisbezorgd, UberEats. Therefore, this subchapter examines their concepts, application features, and ratings. Analyzing the core features of these applications will help us look at the areas they do not cover and identify the competitive advantage of our proposal.

Deliveroo is a food delivery company that acts as an intermediary between clients and restaurants. Through the Deliveroo website or mobile application, users can order takeaway as well as discover new exclusive places for eating out. It works by integrating several parties: customers who place an order, restaurants that prepare the food, and the middle-men or the riders, who collect the request from the restaurant and bring it to the customer. Deliveroo occupies 9th place in the section of Food & Drink on the Dutch App Store, with a 4.6 application rating (SimilarWeb 2020).

Deliveroo's interface is convenient and user-friendly. The application has a search box where the user can find a specific place, dishes, or cuisines. On the main page, customers can find various offers and discounts. Each food enterprise has its page with its menu, description, rating, and its remoteness from the user. An additional advantage of the application is its ability to integrate with the restaurant POS and kitchen for easy food delivery management. It improves restaurant workflows by organizing the orders automatically so that the team members can focus on customer service and prepare a meal for the delivery instead of determining which order should be made first.

Thuisbezorgd is another delivery service operating in the Netherlands. It offers its users a wide range of restaurants for food delivery. Furthermore, customers can see popular dishes, track the delivery status, and re-order the meal. The application takes 1st place in the Food & Drink section on the Dutch App Store (SimilarWeb 2020). The application offers standard features for its users: meal delivery, place search, place ratings with pictures, and special offers. Unlike other mobile applications, the Thuisbezorgd does not offer integration with the POS systems, which creates limitations for the restaurant owners since they need to install another application to trace new orders.

Next, UberEats is an online mobile platform that delivers food from local restaurants straight to the customer's door. It is one of the largest ride-sharing applications that operate in more than 20 countries worldwide, including the Netherlands (Business Strategy Hub 2020). Its development and a significant share of the food delivery market makes chains such as McDonald is more willing to work with them (Weiner 2017).

UberEats platform connects three parties: restaurants, customers, and drivers. It takes 30% of commissions on each order, and the rest 70% goes to the restaurant for each order sale. Additionally, restaurant owners have a one-time payment of between 300\$ to 500\$ for the partnership with the application. In exchange, restaurateurs receive additional promotions and new customers coming to their place.

UberEats functions are similar to Deliveroo and Thuisbezorgd. Besides its primary purpose of delivery, the application has the search option, place ratings, and exclusive meal discount deals. Also, UberEats gives restaurants the integration with their POS system.

As it can be seen from the analysis, the primary function of all competing applications is delivery. Already existing platforms also aim to provide some benefits for the restaurants: namely, revenue growth and customer expansion. In the meanwhile, the author's mobile application functionality provides other features: table-booking, pre-order, and bill payment. Table 6 compares the functions of the existing mobile applications operating on the Dutch market with that of the author's concept idea.

Table 6 Comparisons of competitors' applications' features

	Thuisbezorgd	Deliveroo	Uber Eats	The author's application
Delivery	+	+	+	
Search	+	+	+	+
Rating	+	+	+	+
Special deals	+	+	+	+
POS integration		+	+	+
Pre-order				+

Book a table				+
Pay a bill				+
Leave tip			+	+

Thus, the mobile application's competitive advantage lies in the new features that it offers for the customers: an option to pre-order, book a table and self-payment of a bill after finishing their meal. These features enable visitors to save time and make the process of eating out smoother and more convenient. For the restaurant owners, the features allow to reduce the service time, thus increasing the turnover, and increasing profit.

## 5 EMPIRICAL RESEARCH AND DATA ANALYSIS

### 5.1 Empirical Research Design

As it was mentioned at the beginning of the thesis, there are two main research methods: quantitative and qualitative. Quantitative technique measures numerical data, which is then analyzed by graphical and statistical techniques. In meanwhile, qualitative research focuses on non-numeric information and obtaining an in-depth understanding of the issues. (Saunders et al. 2016, 166-168.) As the main objective of this research is to measure the potential demand of the mobile application on the Dutch market, a qualitative method was implemented. To answer the main research question, the qualitative method was selected in this study.

There are different methods of data collection in qualitative research: observation, focus group discussions, and interviews (Gubrium, & Holstein 2001, 57). Observation is the oldest research approach that involves using senses for data collection, such as looking, listening in an organized and meaningful way (Given 2008, 573). Focus group implies to a group discussion on the matter to identify participants' thoughts, opinions and perceptions regarding a specific topic. The in-depth interview is a technique comprises direct communication with participants one by one to examine their perception of a certain situation, idea, or concept. It obtains information from respondents' experience, thoughts and behavior which helps to explore the research topic in depth. (Milena et al. 2020, 1279.)

In this study, the observational approach was not applicable for this research, since respondents' opinions and experience are essential for the research results. Also, the focus group interviews were not selected for several reasons. Firstly, a collective discussion will not help to reveal the features of doing business in a particular restaurant. Secondly, respondents will not be able to provide their feedback for the mobile application concept fully and independently. Focus groups, as well as in-depth interviews, obtain information directly; however, interviews in opposes to focus groups aim to collect the data in a more detailed and independent setting. (Boyce 2006.) In-depth interviews, in comparison with focus groups, enable the researcher to dedicate more time for each respondent and deeply immerse in researching issues.

Moreover, in-depth interviews, in contrast to focus groups, lack such drawbacks as bias. Objectivity can mislead the research while discussing problems and dissatisfaction. Participants can catch a negative wave, and then it will be challenging to move the dialog back to the constructive process.



Therefore, the interview method was selected for the data collection technique in this research. This approach enables the researcher to immerse in the specifics of doing business in a particular restaurant and measure restaurateurs potential interests for the mobile application integration into their business

## 5.2 Interview Structure

The nature of any interview should consistently reflect the research questions, objectives, and purpose of the study. There are several types of interview, the determination of which depend on the research purpose and strategy: structured, semi-structured, and unstructured. A structured interview applies a strict set of questions in a standardized manner that usually pre-planned by the researcher. In comparison, the semi-structured type does not have a pre-written plan of questions, but rather a list of themes and key questions that need to be covered. The structure of this interview can vary from one interview to another. In the case of the unstructured interview, the research aims to explore in-depth a particular subject. There is no pre-compiled list of questions, although the researcher must keep in mind all the topics that he explores. The interviewee's perceptions guide the direction of the research and topics discussed. (Saunders et al. 2016, 388- 391.)

In this research, the most common interview type - semi-structured was applied. This type combines a combination of structured interviews and free conversation. The researcher creates the framework of the interview - a set of required questions and their sequence, a detailed interview scenario can be found in APPENDIX 1. However, in the process of the interview new questions can be added for clarifying or obtaining specific information to achieve the research goal. A semi-structured interview avoids the formalism inherent in rigidly structured interviews, and at the same time provides the researcher with a basic scheme that helps to control the course of the conversation and direct the research in the right direction.

## 5.3 Interview Design

After considering the types of interviews available in the qualitative research method, it is important to examine suggestions that help prepare a structured interview with participants. According to Creswell (2013, 163-166), there are different steps need to be followed while conducting an in-depth interview:

- 1) Identify main research question or issues to be addressed.
- 2) Select relevant interviewees

- 3) Choose method and mode
- 4) Determine the methods of recording interview
- 5) Develop the interview guide
- 6) Conduct pilot interviews
- 7) Choose location for face-to face interviews
- 8) Use recording techniques

This study aims to identify potential demand for the mobile application introduction to the Dutch market. Therefore, to evaluate the potentiality of the application, an in-depth interview plays an essential role in assessing the current market situation, learning about contemporary business challenges, and measuring application functions suitability for its users. The conduction of in-depth interviews with the target audience- Dutch restaurant owners allows the researcher to collect primary data. The obtained information is an essential step as it helps to answer the main research question of whether the mobile application will be in demand or not.

Three main criteria were applied while selecting interview candidates: their position, type of restaurant they are working, and location of the place. The interviewees should take a leadership position as a manager or owner in a specific type of restaurant located in Amsterdam, Rotterdam, or The Hague in the Netherlands. The selected criteria are explained by the focus of the application on a specific user group. All the participated candidates have extensive experience working in the restaurant industry, and the author believes that their opinions, interests, and suggestion about the new mobile application will demonstrate its potentiality.

As it is indicated in the previous sub-chapter, the researcher has selected a semi-structured interview type. It gives the researcher a set of required questions and their sequence. Even though, during the interview process, the course of the questions can be changed by adding new and asking clarification. It helps in learning new facts and digging deeper into the researching aspects, making sure the research question is answered. A semi-structured interview avoids formalism typical for the structured interviews, and at the same time, allow to control the conversation and guide it in the right direction.

The interview process called for an audio recorder on a mobile phone. The reason for choosing this recording mode is the accessibility and simplicity of use.

The next step was to create the interview guide, which includes main objectives and questions for the interview. The manual has consisted of two main parts. The first one

contained ten questions, which aimed at learning about the business experience of interviewees and learn the tools they apply. The second part of the interview included the mobile application demonstration and the questions regarding this concept. In this part, open-ended questions were designed to obtain spontaneous reactions and initiate detailed responses of interviewees' opinions.

The next step was to conduct a pilot interview. It is done to test the interview guide and see how workable and correct the script of the guide is drawn up. The researcher conducted one pilot interview. Its results have shown that the scenario was working. Therefore, it was decided to include this interview in the sample as changes to the original guide were minor.

In the process of the interview, all the data was recorded. The analysis of gathered is then provided in the following sub-chapters.

#### 5.4 Data Collection

The initial plan of the research was to conduct six quality, in-depth interviews. In each foodservice enterprise, one interview was conducted regarding their current business situation and testing the mobile application concept. Thus, in one foodservice enterprise, only owner or manager was interviewed, since specifics of the institution would make their answers very similar. In the case of information scarcity or insufficiency, it was planned to increase the sample size of the interviewees to the "theoretical saturation."

Before conducting an interview, it is vital to ensure that all interview candidates match the selected criteria. In the case of this study, the candidates should fall into the potential user group of the mobile application. Therefore, in the process of selecting potential interviewees, two main criteria were applied. The type of food-service enterprise the interviewee works and the location of the place.

The selection of the first criterion is determined by the application targeted at a particular restaurant type concept - full-service kinds. Thus, the sample size narrows to cafes, restaurants, and bars. Therefore, the owners of such places were selected for the interview participation. As for the geographical criteria, a food enterprises have to be located in one of the three Dutch cities - Amsterdam, Rotterdam or The Hague. These areas were selected due to their height food service enterprise concentration, as well as the initial mobile application introduction in these cities.

The initial method of finding the respondents took place by email newsletter. In the emails, people were invited to become participants of the research. This method allowed the

researcher to find only half of the total of the respondents. Therefore, it was decided to extend the sample by applying the "snowball method." The snowball method is a technique relies on referrals from initially sampled interviewee to other individuals believed to have relevant interests and characteristics (Johnson 2014). Thereby, with the help of friends, acquaintances, as well as already surveyed people, the author could find more restaurant owners and managers suitable for the interview. This method of sampling is the most relevant, since it was not possible to interrogate the required number of respondents in other ways.

The heterogeneity of different sample methods ensures that the restaurant owners and managers are not familiar with each other, thereby the "entry points" are different, which allows to interview participants from different enterprises and obtain diverse experiences and opinions about the application concept.

During the interview process, the researcher used a tape to record the answers. All the participants were informed about the recording procedures and gave their permissions to be recorded. It allowed the researched to focus on the process of the interview better. The gathered data is confidential and was used in a generalized form to answer the research questions. The interviews were conducted on Skype and Google Hangouts, as it was not possible to meet with the respondents in person. Each interview lasted for 45 minutes.

As a result, the following respondents were received (names were changed to maintain confidentiality):

1. Juli Nikitina, 34 years old, owner and director of the Coffee Some Time café.  
A small coffee specially café in Amsterdam, which serves excellent coffee, breakfast, and lunch. Its Traffic around 200-300 people per day.
2. Valentine, 32 years old, manager and co-owner of the restaurant T Singeltje Pancakes. A pancakes restaurant that offers breakfasts, lunches, and dinners in the center of Amsterdam. The traffic of the place is about 100 people per day.
3. Juan, 36 years old, restaurant manager of Hoxton restaurant. The place belongs to the worldwide hotel chain "The Hoxton" and located in the center on Amsterdam, that. Around 400- 500 people per day coming to the restaurant.
4. Elsa Bakker, 33 years old, general manager of the restaurant chain "The Seafood bar" in Amsterdam and Utrecht with four different locations. It is seafood restaurant serves lunches and dinners. The people flow usually vary from 300- 600 per day.

5. Filipe, restaurant manager of House of Watt, located in Amsterdam. The place serves 3 courses of meal and have from 300- 500 people per day.
6. Lise, restaurant manager and owner of the “Harvest coffee” café located in Rotterdam. The concept of the place is coffee specialty café, which offers breakfasts, branches, and lunches. The place has around 100-150 people per day.

## 5.5 Data Analysis

This sub-chapter provides data analysis for the first part of the in-depth interviews with Dutch restaurant owners and managers. During the interview author aimed to learn about features of the Dutch restaurant industry, different tools used in the restaurant business, and the challenges that Dutch restaurateurs experience. The collected data allows identifying gaps and problems that can be solved through the new mobile application introduction.

In the process of data analysis, the Grounded theory was used. The Grounded theory is a process of analyzing, interpreting, and explaining the meaning of social interactions and process in a broad range of context. It provides a structures approach of collecting a qualitative data. (Saunders, Lewis & Thornhill 2009, 193- 195.) Strauss and Corbin (2008, 62) determine open coding as “the naming and categorizing of phenomena through close examination of the data”. Thus, when words or sentences from the transpired interview are underlined, the researcher choose parts, which might create patters.

In this study, the grounded theory with open coding method was applied. Thus, at the stage of the interview guide creation, the researcher identifies core categories, around which the research is focused. The created categories help to facilitate the data analysis process.

Once all the data is collected, the research transcribes the interview recording into a written document. After each of the identified categories, a specific color is selected. Coding with colors helps to classify and process the information. Thus, all the categories are filled with relevant information obtained from all the interviews according to colors. Once the coding with the color is finished, the researcher can fill the categories, analyze the formed groups, and draw a conclusion.

In this research, the coding approach was applied for both parts of the interview. For the analysis of the first part, the author identified the following groups: budget allocation, attraction of new clients, retention of old customers, monitoring the work of employees, and staff motivation.

To each category, a specific color was indicated for facilitating the data analysis process. Thus, in each transcript of the interview, the researcher highlighted answers in a particular color, which relates to one or another category. Later, the highlighted data is grouped with the same color, and a conclusion is drawn for each category.

### 5.5.1 Participants Business Experience

Doing any business is associated with problems and risks, and the restaurant industry is no exception. The interviewed managers and owners of food enterprises highlighted several challenges they face. The mentioned difficulties fall into the following categories:

- Budget allocation
- Attraction of new clients
- Retention of old/regular customers
- Monitoring the work of employees
- Staff motivation
- Visitors flow regulation

Later, each challenge is considered in more details.

#### **Budget allocation**

The problem of budget allocation is primarily associated with a lack of understanding of the effectiveness of programs to attract customers.

*“We tried to create different loyalty programs but did not see their effective result”.*

*Lise, 31*

#### **The attraction of new clients**

Attracting new customers is a particularly grave problem, as the restaurant’s revenue directly depends on the number of visitors. It is especially essential to attract new visitors to those cafes and restaurants, which are in alleys, where people have low traffic.

*“Even though the location is quite central, the place itself is a bit hidden, so to attract and promote the place for the clients we have to use other channels, like social media or google ads. It means we have additional costs for the promotions”.*

*Lise, 31*

*“It is hard for us to find new customers; our restaurant is a little hidden among the houses, and some do not know that our restaurant is here. We tried to advertise, but it did not significantly increase the number of people”. Filipe, 37*

As was mentioned above, the seasonality is typical of the Dutch restaurant industry. In the "empty" months (for example, during children's vacations, when the number of visitors decreases), owners are particularly concerned about the problem of attracting customers.

*"Become busier during the quite month". Juan, 36*

Respondents identified the following ways to attract customers:

- Social media marketing and collaboration with bloggers

*"We create eye catching content. We also used to contact influencers".  
Valentine, 32*

- Cards for the first free coffee

*"We provide cards for a free coffee". Juli, 34*

- Organization of events in the food service enterprise (breakfast with neighbors, concerts, lectures, etc.)

*"On Sunday, we have Jazz bands playing at our restaurant in the afternoon.  
This turned out to be a big success". Juan, 36*

*"I did meetings for the neighbors at our café". Juli, 34*

- Banner advertising

*"We tried advertising on the Internet and on billboards nearby, but this  
advertisement did not significantly increase the number of visitors".  
Valentine, 32*

- Cooperation with tourist guides and hotels.

*"Also, we collaborate with the Amsterdam Food guide". Valentine, 32*

*"Also, we do activations with the hotel: offering breakfast and bed for a  
room". Juan, 36*

### **Retention of old/regular customers**

Some respondents noted that the specifics of their establishment are that it is more profitable for their restaurants to pay more attention to retaining old customers than trying to attract new ones (for example, restaurants and cafes that are not located in the tourist area).

*“The people who will continue coming to us every day live nearby. They will make up about 30% of the income, and again, this is the audience that will not allow the place to be empty when there is a hurricane on the street. Therefore, it is important to build relationships with your guest”. Juli, 34*

Respondents identified the following customer retention methods:

- Promotions and special offers

*“During the first six months, we focused on attracting and retaining customers, trying to make guests like us. We did various actions and meetings”. Juli, 34*

- Social Networking

*“We have an advertising page on the Amsterdam web page, which is quite helpful for the attention of the locals and tourists”. Valentine, 32*

- Passive advertising - postcards in mailboxes to people who live near cafes

*“We try to attract neighbors by sending them small card on special holydays”. Juli,34*

- The feedback receiving from customers. It is essential to mention that working with reviews is critical for business development. Respondents use different ways of collecting feedback: social media reviews, complaint book, personal communication with staff. Interestingly, personal interaction is considered the most accurate and useful method of obtaining feedback: only by contacting one-on-one is it possible to solve the problems that have arisen quickly, and to understand the needs of your audience better.

*“I believe that it is crucial to receive feedback. Without this, it is not clear where your business is developing, and it is impossible to see the whole picture on just one statistic. Therefore, live contact is significant”. Juli, 34*

*“We find feedback is very important for our business as it helps to see what people like and what they don't. We use such channels as Google and asking people for the feedback when they are leaving”. Lise, 31*

*“All the time. That is is the key to our service. We always check how the food is delivered, the manager talks with the guests to make sure that everything is on track.” Valentine, 32*



- Loyalty programs. Even though respondents mentioned loyalty programs as a popular way of retaining customers, in practice, they are used little or not at all. This is due to uncertainty about the effectiveness of this method or dictated by the specifics of the institution (for example, if 90% of visitors are tourists).

*"We used to have gift cards, but I don't really believe in loyalty programs".*

*Juli, 34*

### **Monitoring the work of employees**

Employee control is an urgent problem only for those establishments where frequent staff changes take place. In family restaurants, employees are well acquainted with each other, often are relatives, so there is no need to spend effort on control.

*"We have many young students who work just for a few months, for several hours per week. So, in Amsterdam, in particular, it is tough to achieve the official team. We managed to do that at the most senior positions and in the full-time groups, which are the core of the business". Juan, 36*

*"Making sure all dishes are the same in portioning and presentation. Managing teams with new generation managers and employees". Elsa, 33*

*"Since we are not a big team, and we are very close. <...> I do not see the point in the program since we are such a small team". Valentine, 32*

### **Personnel motivation**

Work with staff is an essential aspect of doing business, as waiters are the ones who create the image and atmosphere of the place. Restaurant owners note that an individual approach is required in working with employees. The staff will not invest in their work if their efforts are not appreciated.

*"Your employees are your brand ambassadors". Elsa, 33*

*"If the staff feels that they are not rewarded for their work, then it may reflect in their work: the staff might be rude with guests if they are tired or out of resources". Juli, 34*

Owners motivate their employees through material incentives, extra days off, or additional working hours (this allows employees to earn more money per shift). Also, restaurateurs try to create strong ties within the team through friendly communication, team building, informal communication, and gifts.

*“We try to create a strong bond within the team by doing activities together time to time”. Lise, 31*

*“Sometimes, as a bonus, I give staff extra days off. Weekend shifts are intensive days, and personnel would like to spend weekend time with their partners instead”. Juli, 34*

*“For some workers, the main motivation is extra hours per month, so their earnings are higher. It is very individual with everyone”. Juli, 34*

### **Visitors flow regulation**

Respondents identified factors that affect the number of visitors:

- Season - a common factor, including weather conditions, holidays, and tourist seasonality.

*“Summer and spring are very tense times”. Valentine, 32*

- Weather conditions - in bad weather people prefer to stay at home and do not visit cafes and restaurants. Good weather conditions have a positive effect on the customer flow.

*“Recently, when there were hurricanes in the Netherlands, permeability in cafes, overall statistics fell by 70%”. Juli, 34*

- Day of the week - on weekends there are more people in restaurants than on weekdays.

*“On weekends, we are almost always full”. Valentine, 32*

*“On weekends, especially in the evening, people even sometimes wait for a table for 20-30 minutes”. Filipe, 37*

- Tourist seasonality - in spring and summer there are many tourists in the Netherlands.
- Time of day - at lunchtime and in the evening, there are more visitors than in the morning.

*“We have some days during a week, when the café is half full. In particular, on Monday and Wednesday the café is almost empty. Also, early morning hours, after the opening from 9:00 to 10:00 the café is not too busy”. Lise, 31*

Respondents note that they lack of the tools to level the described above factors that affect the customer flow. On busy days/hours, the restaurant cannot cope with the load, and at other times it becomes very empty.

### **Guest tracking**

The managers have tools for statistics: at the end of the day, they obtain data on how many visitors were in the restaurant per day, how many dishes were sold, which menu items are the strongest / weakest for sales.

*“We don’t track the number of guests, but at the end of the day, we finalize how many pancakes and dishes we have sold. It is how we make estimations of how many guests we had”. Valentine, 32*

*“So, at the end of the day we can see the analytics about how many positions were sold and how many guests we had”. Lise, 31*

However, as mentioned above, managers lack a tool to develop forecasts to be able to predict the number of visitors more accurately and try to influence it.

*“Not enough planning tool to help predict sales”. Jule, 34*

### **5.5.2 Mobile Application Testing**

In this subchapter, the second part of the interview is analyzed, in which the mobile application was demonstrated to the participants. During this part of the conversation, the researcher showed to the participant the application concept and interface design. The interview materials are provided in APPENDIX 2 and APPENDIX 3 accordingly.

For the data analyses, the same method of coding was applied. The author created the following categories, which help to evaluate potential demand for the mobile application: spontaneous reaction and overall impression of the concept, originality, audience relevance, advantages, disadvantages, motivational potential, product cost expectations, and suggestions for improvement.

#### **Spontaneous reaction and overall impression**

The mobile application concept is perceived positively: respondents see the benefits of using the new technology. It seems original and arouses interest and a desire to learn more about the application.

*“I find this concept interesting, I would like to learn more about it”. Elsa, 33*

*"I do like the overall idea of the application and I think it could really work". Juan, 36*

*"I think it is innovative idea". Lise, 31*

However, from a more detailed examination of the mobile application, the respondents raise many questions related to its integration into their business processes:

*"My first impression is that the application idea is great, but then it's not quite clear how it works? In which bundle?". Juli, 34*

The most interesting functions for the respondents were the features of self-payment and pre-order. Restaurant owners have never seen these features before.

*"I think that in general there are no similar to this application now, someone does the delivery, someone shows the rating, but nowhere is there any way to place an order or pay immediately". Juan, 36*

The application function of self-payment for the order allows the restaurant team to serve customers efficiently:

*"I really liked the self-pay feature, I think it's very convenient". Juli, 34*

*"I think it could speed up the service process and increase the guest's turnover. Also, the fact that the application will attract new people and promote our restaurants is a great thing". Elsa, 33*

In the meantime, the pre-order function will increase loyalty among the working population because the aspect of saving time is especially relevant and essential.

*"... it allows you to order and pay for a meal and drink by a certain clear time and then run in and pick it up. It is a very convenient feature". Juli, 34*

*"The self-payment system through the application is fascinating; I love to do it as it increases the process and its efficiency. So, the pre-order function is interesting". Juli, 34*

The least interesting function is "guests' information", due to the fact that it infringes the rights may alienate potential consumers.

*"Guests' information is not going to work in Holland. People here are obsessed with privacy. Therefore, it will not be valuable as a separate function for the application". Juli, 34*

## **Originality**

In general, participants perceive the concept as the original. It differs from the other present applications on the market, so restaurateurs have not seen such functions before.

*“No, I haven’t seen. I saw something similar in the beauty industry. I think this app is rather unique product and a unique concept”. Juli, 34*

*“The interface reminded me a little bit of the Uber Eats app, but not the functions. I think it is pretty unique and innovative concept”. Elsa, 33*

*“I don’t think I ever saw the pre-order food possibility as well as the self-payment option. So, this idea entirely original”. Lise, 31*

Simultaneously, not all application functions considered unique, since other services providers analytics (the number of visitors to and from orders) and reviews, delivery, and rating.

*“I think in general there are no similar to this application now, someone does the delivery, someone shows the rating, but nowhere is there any way to place an order or pay immediately”. Juan, 37*

The application interface design is like Tripadvisor, Google, and Uber Eats. The resemblance to familiar services is recognized instead as a virtue because the application becomes intuitive. At the same time, respondents note the uniqueness of the tested application: many functions are exciting and will be useful for restaurants.

*“I haven’t seen a similar concept, though it does remind me a little bit of the TripAdvisor or google, but with the extended options”. Filipe, 36*

*“I saw Uber Eats, which also shows restaurants, but their functionality is different from what your application offers. If a lot of people will use your app, then it will bring benefits and probably new customers to the restaurant”. Juan, 37*

## **Audience Relevance**

Some respondents noted that they would be interested in the application, as it fits the format of their food enterprise.

The application is especially relevant for restaurants which target audience is a young audience:

*“Since Coffee Sometime is a young and modern business, mainly designed for Millennials - young and advanced audience, who has their phones as a hand extension. The more statistics we collect, the better. Many businesses try to rely*

*on statistics and numbers. So, for my place, this would be a cool application to launch". Juli, 34*

*"We're quite open to new technologies as the primary audiences are young people from 18- 45 years old". Valentine, 32*

Especially interesting the pre-order function for food enterprises located in the business districts. As office workers value their time: in conditions of limited time for their lunch breaks, this application feature will be especially in demand:

*"Yes, I think this application would be useful for our restaurant. I liked the pre-order function most of all since we are located near office buildings, and people are in a hurry. This function could attract more workers. Also, the feedback function looks convenient in my opinion". Juan, 36*

*"The pre-order function seems very interesting. Many of our customers are in a hurry if they are late for a working meeting, they can just order food in a restaurant in advance and come once the food is prepared". Filipe, 37*

*"It is very convenient. This will be handy for cafes in Amsterdam". Juli, 34*

The pre-order food feature is also relevant for restaurants, which located on crowded streets, with a massive flow of visitors:

*"We are usually quite busy and have a large customer flow during week and weekends, so I think this app could potentially support and enhance our service". Elsa, 33*

This mobile application is not suitable for food enterprises whose philosophy rely on personal contact:

*"But I still think that personal contact is very important, and we would like to keep it". Lise, 31*

*"But I don't see it happening in the in the way of service that we provide at Hoxton. <...> we aim to have face to face contact with our guests". Juan, 36*

## **Advantages**

Potential application users highlight numerous advantages of this concept. Its features will reduce the time spent on customer service, speed up work processes, attract new customers, and increase the profit of the institution.

*"I liked the pre-order food feature. I think it is beneficial and will help to reduce the time spent on a customer unit". Juli, 34*

*"A good point about the application is the speed-up of the working process and data collection with its results". Valentine, 32*

*"The strong point is an additional channel for customer attraction and sales increase". Elsa, 33*

*"The strong point is that self-payment can unload waiter service during peak hours so that guests can leave any time they want after the payment". Lise, 31*

## **Disadvantages**

The disadvantages of the app are the complexity of its integration with the other systems already installed at food enterprises as well as staff training to the new technology.

*"The weak is the integration of a new tool, which will take time to get used to and integrate with other devices". Juan, 36*

*"The weak point is the fact that it might take a while for this technology to integrate fully into the business process". Elsa, 33*

*"Do not forget that most food enterprises are a family business, where at the cash desk, there will be a person at the age whom the idea of such an application can scare". Juli, 34*

The weakness of the application is its unpopularity and lack of publicity. Restaurant managers fear that at the beginning, few people will be aware of the application and use it:

*"Of the weaknesses, I would note that you need to find many users to make the application popular". Juan, 36*

*"Nowadays, it is challenging to make an informed user download a new application, since people already have a lot of applications on their phones, so the app's functions must be persuasive". Juli, 34*

Another drawback and barrier to using the application are the impersonal restaurant-client relationships. In fact, in each industry, we are dealing with a "difficult customer," but problem customers in gastronomy are a much more sensitive topic. Restaurateurs are sure that the problems that arise with the client need to be solved here and now. In the absence of personal contact (points about self-made payment and pre-order), the client may remain dissatisfied, and the restaurant may receive negative feedback.

*"The weakness will be the lack of personal contact". Valentine, 32*

### **Motivational potential**

The concept of a mobile application has a very high motivational potential: practical and unique features will help to cope with current challenges and increase food enterprises' profits:

*"I think this may be a useful application. It has a lot of good ideas". Juan, 36*

*"I think I would like to try this application and see the changes and opportunities it will bring". Elsa, 33*

*"Some functions can be useful to us, so I think yes, I would like to know more".  
Filipe, 37*

However, not all the application features demonstrated are clear and interesting for potential users; therefore, respondents would like to test this application in practice to verify their advantages personally.

*"I would like to try it for a couple of months to see if it would bring us some benefits or not". Lise, 31*

*"Of course, it's worth creating a trial version of the application to understand whether such an application will be relevant". Juli, 34*

It is important to note that despite rather high interest and desire to get to know the product closer, respondents do not consider the application as an independent system for solving marketing problems. The application is perceived as an additional way to increase the productivity of the institution.

*"I would certainly like to use the application as an additional promotional platform for the restaurant, as well as its function as pre-order. Though, I don't see self-payment features that would suit this restaurant concept". Valentine, 32*

*"I see more like an extension of TripAdvisor". Juan, 36*

### **Product Cost Expectations**

Application cost expectations range from 20 to 100 euros per month + percentage of each guest who came through the application. This cost is considered quite adequate for potential profit, which may increase due to the application usage at the restaurants.

*"It depends on how many customers it brings to us and how many people will use this application. But I'm ready to pay about 100 euros". Juli, 34*



*“I think I would pay around 50 euros per month for such a product, especially if it would help our café”. Lise, 31*

At the same time, owners would like to have several payment options: a monthly subscription with a fixed cost, a fixed payment for each guest who came through the application, or percent of the revenue of those who paid via the application.

*“Two ways: percentage of sales through offers or as a monthly subscription”. Juli, 34*

*“Some platforms charge you 0.5 cents or 1 euro per person, so not based on sales, but based on the number of people coming”. Juan, 36*

### **Suggestions for improvement**

Respondents are interested in the pre-order function, but it needs to be improved. Managers want to be able to accept or decline the order in case the restaurant is full. This possibility will help save the restaurant from overload and make sure visitors will have a table.

*“The pre-order function should be improved. For this function would be good to add an accept/decline option for the restaurant side”. Valentine, 32*

*“Additionally, cancelation regulation. Let’s say if a customer wants to cancel an order, it can be made within a particular time because otherwise, it will cost money”. Valentine, 32*

*“Also, from the visitor point of view: if I want to pre-order, I want to be sure to have a table to sit”. Valentine, 32*

Additionally, owners want to understand how function will work in case a client is late. Both sides will be affected: the client will receive cold and less delicious food, perhaps the customer will lose the table, and the restaurant will receive its money for the order, but the reputation of the restaurant will be spoiled. This concern is understandable from the business viewpoint. However, this issue can easily be resolved by implementing a notification feature within the application, which will remind the client when their order is ready.

*“Also, the pre-order function should be foreseeing the action plan in case the person will be late, and the food will get cold, or what if there won’t be enough place to fit in all the costumers”. Elsa, 33*

During the conversation, respondents noted difficulties that could be solved using the new application features. The current version does not resolve the issue of planning and forecasting. As we said in the previous part, the workload/fullness of the institution depends on many factors. The managers would like to know in advance when the “influx” of guests is planned to order more products, and when the restaurant will be empty to give waiters an additional day off and reduce staff costs.

*“Create another feature in your mobile app — a planning tool that helps predict sales. It will show a calendar of holidays. Thus, it will help restaurateurs’ managers to anticipate and plan for the next six months what should be done in terms of delivery or marketing. Therefore, this particular combination of analytics/marketing will help reduce costs”. Juli, 34*

An additional feature of the app could be a possibility to call a waiter through the app. Often waiters are busy or do not see when guests are ready, so it takes time until waiters notice the clients. The new feature will be simple and convenient for both sides: guests and waiters.

*“I think it would be great if the app had a feature like a waiter calls. Our restaurant has different spaces, so it is difficult to track all the guests at the time”. Lise, 31*

The application interface design evokes positive emotions: it attracts with its simplicity and user-friendliness. There are some similarities with TripAdvisor (due to the color scheme), and Uber Eats (due to the interface) is noted. Potential users would like to see the simple and intuitive interface, with a unique design that will differ from other applications.

*“I think the layout is already very appealing, very to use, it has some Uber Eats or TripAdvisor feelings”. Juan, 36*

*“The design is very nice; maybe it can be changed a bit to look different from other apps”. Elsa, 33*

### 5.5.3 Data Analysis Results

The obtained data from the interviews allowed us to identify current challenges and gaps, which can be filled with a new mobile application introduction. Interviewed restaurateurs see the potential in the new concept: it can solve several problems and simplify business processes.

The self-payment and pre-order functions became one of the most remembered features of the new mobile application. This was attributed to their originality, as there are no such

functions available on the market. These application features enable to increase customer service and loyalty, especially among the working population.

Some potential barriers might prevent integrating application to the business processes. The first barrier is the existence of ambiguities; for example, in case a restaurant is filled to full capacity, the pre-order function will expand the overall workload of the restaurant. Second barrier is the lack of demand for some functions such as obtaining visitors' data and their purchasing history. These functions breach visitors' confidentiality and such data is collected by other already existing management systems. However, the identified barriers can be overcome. Even though the demand for some functions seems to be low, data that can be obtained by implementing these features will help restaurant owners to form predictions and forecasts regarding the customer flow. Additionally, by offering a free trial of the application, restaurant managers will personally be able to evaluate the convenience and effectiveness of the mobile application according to their business needs.

Moreover, interviews revealed unmet need: restaurant owners lack tools to predict and manage the visitors' flow. Therefore, by adding such functionality to the mobile application, the attractiveness and demand for this technology will increase substantially, by making it more relevant.

Overall, the application concept is relevant to the market. Potential users recognize its potentiality with minor improvements. Thus, the application can improve business processes and positively affect the profit of food service enterprises.

## 6 CONCLUSION

### 6.1 Answers to the Research Questions

The researcher facilitates the main research question with several sub-questions to support the research process. Therefore, the answers to raised questions are given in the logical order: sub-questions and then, main question.

The first research sub-question aimed to give an insight on how the process of market research might look in a given restaurant industry. The question is formulated in the following way:

#### **SubQ1: How to conduct market research in the restaurant industry?**

To answer this question, firstly, a theoretical framework of market research theory was developed. There is no single infallible method of conducting market research in the restaurant industry, and the selection of elements for analysis is heavily dependent on individual research design. Based on the theoretical insights, the author identified the following aspects of interest, specifically for this research paper: economy overview, target industry overview, market size, growth, and trends.

#### **SubQ2: What is the current state of the restaurant industry on the Dutch market?**

Once the critical factors of the market research are identified, the next step was to test them empirically. Analysis of the restaurant industry was done by collecting information and statistics from various sectors and article publications related to the Dutch restaurant market. The current market environment is described in detail in sections 4.2 & 4.3.

Firstly, the desk research of statistical data and economic reports demonstrated that the Dutch economy is thriving and open. Its recent growth has subsequently increased people's purchasing power, which in turn has positively influenced the development of the restaurant industry. Since the application aims to benefit the Dutch restaurant industry, the author looked at its current environment of the target industry. It is expected that among the various food enterprises in the Netherlands, restaurants, and cafes will continue to grow and maintain its popularity among the Dutch consumers in the near future. The evaluation of the market size has shown that the Dutch restaurant industry is well-developed and attracts a significant number of people daily. The number of food enterprises, along with the annual revenue of the restaurant industry continues to grow steadily. Therefore, the potential of the mobile application's growth is estimated to be right according to the current market size of the restaurant industry.

The highest concentration of food enterprises was found to be in Amsterdam, Rotterdam, and The Hague. Therefore, the mobile application will first be introduced in those cities. Finally, the analysis has revealed the following factors that influence and shape the industry: changing demographics, time consciousness, digitalization, and technological advancements. To stay profitable and meet the consumers' needs, the Dutch restaurant owners must adjust their business strategies and implement most current technological advancements in their business operations.

Overall, the market research for the mobile application has demonstrated that the Netherlands is economically stable with an actively developed restaurant industry that is consistently highly popular among an average Dutch consumer. Therefore, the combination of all these factors makes the Dutch market highly favorable for the introduction of the new mobile application.

**SubQ3: To what extent does the Dutch restaurant industry demand a mobile application that optimizes communication between restaurateurs and customers?**

The potential demand for a mobile application that optimizes the communication between restaurateurs and customers is less than anticipated, as the restaurants' owners have enough existing tools. It was revealed that the business automation process is not well developed in the Dutch restaurant industry. Most of the challenges are solved in traditional and non-automated ways: via personal contacts and direct interactions. However, the application still has a potential on the market, as its target users recognize its relevance and admit that the application can tackle existing problems of customers' communication and business processes efficiency.

Once all the sub-questions are answered, the research can answer the main research question:

**What is the potential of a mobile application on the Dutch market in the restaurant industry?**

Conducting interviews has enabled the researcher to identify the potential of the mobile application among its potential users. Dutch restaurateurs have noticed the concept' advantages by which they can tackle existing business challenges and gaps. Therefore, this mobile application has considerable potential in the Dutch market in the restaurant industry.

Interviews with Dutch restaurateurs identified existing problems the restaurateurs encounter in their business operations: budget allocation, attracting new customers,

retaining regular customers, monitoring employees, motivating staff, and regulating the flow of visitors. The mobile application can handle several existing problems as well as speed up existing business processes.

Moreover, the study revealed another unmet need for the restaurant owners: lack of predictions and regulating tools for estimating the visitors' flow. Thus, adding such a feature will increase the attractiveness of the application and make it more relevant to the marketplace.

Furthermore, the strengths and weaknesses of the application were identified. The most notable features were the pre-order and the self-payment functions. These features are unique and thus add a competitive edge to existing applications on the market. However, some barriers were identified in the concept: not all functions were relevant and exciting for potential users. Therefore, in general, this concept is working and has a potentiality; however, before the final introduction, some minor changes need to be made.

## 6.2 Reliability and Validity

Two concepts are used to determine the quality of the research: validity and reliability. Reliability refers to the consistency of a measure and the extent to which it can be replicated (Saunders, Lewis & Thornhill 2016). This study has conducted six semi-structured in-depth interviews. To obtain results that are specific to the needs of this study, the participants only with extensive working experience in the restaurant field in the Netherlands were selected. All respondents are knowledgeable in the internal operations of the industry and are interested in making their respective businesses more efficient and attractive to the customer. To maintain consistent answers, a question guide was created and distributed to participants before the interviewing process. After the pilot interview, the guide has undergone minor changes, and more questions were added to obtain a deeper understanding of the research subject and collect more extensive data. However, the added questions did not affect the consistency of the study. Furthermore, it is assumed that the findings of this research can be reproduced in a given time frame provided that the same conditions are met. However, the reliability of a repeated study is likely to be diminished if it is repeated in a different period; for example, in 2 or 5 years.

An important fact to consider is that the primary and secondary data were collected before the outbreak of the coronavirus disease (COVID-19) in Europe in late February 2020. At the time of the interviews, the Dutch restaurateurs have expressed a positive view of a new mobile application introduction. However, a sudden outbreak of the virus has affected many industries and economies, including the restaurants in the Netherlands, and might

have far-reaching consequences for businesses worldwide. At the moment of finishing this paper, Dutch restaurants have been on lockdown for two months. They only continue to offer takeaway services, which shows that Dutch food enterprises have quickly adapted to different operation modes. Although it is impossible to predict what happens to businesses shortly if the world goes back to how it functioned before the pandemic soon enough, most consumers will continue to order meals from foodservice providers. The central concept of the new application - service process optimization - is fully adaptable to newer forms of operations. Since this paper aimed to analyze the potential demand for a mobile application that offers novel features to optimize business service processes, this element of operations is expected to stand the test of time and is likely to stay in demand in the nearest future. Therefore, further research in this area can be continued once the situation gains more certainty.

Validity is an indicator of the credibility of the research findings and the accuracy of the collected information (Golafshani 2003). Since the interviews aimed to find the restaurateurs' attitudes of the application concept, the interview questions were formulated to reflect this issue. The questions were formed to help identify the factors that might influence the restaurateurs' perception and their decision to integrate the mobile application as part of their business. Interviews were conducted when the respondents were off work and had a good rest to minimize the differences in their answers and to ensure they could be attentive to the questions and explain their thoughts clearly.

The author also used an audio recorder in the process of conducting interviews. Recording the respondents' answers has enabled the author to avoid information loss and to allow for a systematic and accurate interpretation of the data. All these elements were chosen to make the findings more meaningful. Hence, they serve the purpose of the study and are valid within the scope of this research.

Based on the factors mentioned above, the overall conclusion is that the research findings of the interviews are reliable and valid within the scope of this research paper and the circumstances it has studied

### 6.3 Suggestions for Further Research

After completing this research, the author identifies further research topics of this study, which can be conducted by other researchers.

As the development and integration of new technology require significant financial investments, it is crucial to be sure that the innovation will be on-demand on the market

before it is end-development. This step enables to minimize possible risks of losing money in case a new product is less relevant than expected.

This research investigates mobile application validity and relevance from one side - restaurant owners. However, it is also essential to investigate the potential demand for innovation from another side - restaurant visitors. Thus, further research can focus on studying the relevance of the application to another user side – restaurant visitors.

Moreover, market research in this study was explicitly dedicated to the market in the Netherlands. Therefore, the economic situation of the particular country, features of the Dutch restaurant industry, and ways of doing business were taken into account. The subsequent researchers can analyze restaurant markets in other geographical areas.

Furthermore, as the application idea is still on its development stage, future researchers can consider the technical aspects of mobile application development. Therefore, future researchers can develop a strategy necessary to turn this concept into a successful working application. Further research can cover issues such as technical infrastructure, product design, the POS integration scheme, programming, and user interface and test these in practice. Thus, these matters can be covered by further researchers.



## 7 SUMMARY

The primary objective of this research was to determine if there is a demand for the Dutch restaurant industry for the new mobile application introduction. One of the efficient ways to evaluate the idea's validity is to conduct market research. Therefore, the desk research in this study aimed at undertaking what market research is, how to conduct it, its components, data collection methods, and its analysis. This theory creates a structure of how to evaluate the idea's validity, measure possible demand on the market, and thus structure further research. There are several components of market research, analysis of which helps to identify mobile application relevance on the market place: economy overview, market size, market growth, market trends, and competitor analysis. The theoretical part of the research corresponds with the empirical findings; thus, the market research components are applied to the Dutch market analysis.

Once the theoretical part is complete, the next step of the research was supported by theoretical findings with the empirical part. Therefore, in the beginning, the restaurant industry analysis, in a general sense, was conducted. In this part, the researcher looked at the factors it influences and possible changes that the industry can undergo. Later, the researching area was narrowed to the restaurant industry in the Netherlands. Thus, the economic, political, and social factors influencing the restaurant industry were considered. To analyze the Dutch restaurant industry development, the statistical data and companies' reports were used.

The empirical part was done by conducting semi-structured in-depth interviews with potential application users – Dutch restaurant owners and managers. As a result, the mobile application was tested, and valuable feedback received. The analysis of the obtained data, answers the research of this thesis.

To conclude, the theoretical framework was established coherently, the information collected and analyzed comprehensively, and the potentiality of the mobile application is identified. Accordingly, the main research question and sub-questions are answered. The findings of the study are reliable and valid. Thus, the mobile application can be introduced to the Dutch market.

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## APPENDICES

### APPENDIX 1 Interview structure

#### INTERVIEW FORMAT

##### FOR RESTAURANT OWNERS AND MANAGERS

Thank you for agreeing to today's conversation. It will take about 30 minutes. Our conversation will be held in an interview format - I will ask questions, and you will answer them. I may interrupt you, I apologize for this in advance, this has to do to the fact that I understood your idea, and we meet the timeline.

During the conversation, with your permission, audio recording will be performed. This is done to ensure that no details of our conversation are missed. This record is then decrypted, translated into text and used to write a summary report. All data will be used in a generalized form, without specifying personal data of respondents.

There are no right and wrong answers. It is **your** opinion, ideas and experience that interests me, so do not be shy and say whatever you think is necessary. Important to emphasize that the results of the study will depend on this information.

#### RESPONDENT PROFILE. INTRODUCTION.

- Please introduce yourself and briefly tell us about yourself:  
What is your name? Where do you currently work? What is your position and how long have you been working there?
- How many guests do you usually have a day?
- How often is the restaurant completely full? What time (during the day) do you struggle massive customer flow? Is the restaurant often empty? When is the customer flow poor? How do you track the number of guests and their order history?
- What difficulties do you face doing business?
- If not mentioned above:** are there any difficulties with customer retention? How do you attract new customers? What do you do to retain the old ones? Are there any loyalty programs? Please tell us more about them.
- Do you find this loyalty program effective? Why?
- What other methods** of attracting / retaining customers do you use?
  - Do you find this loyalty method effective? Why?
  - (How much do you spend a year / a month on a loyalty program? How do you evaluate the cost-effectiveness balance of the program?)
- Do you ask your customers for their feedback? How do you collect it? Please give details. (Personal feedbacks, reviews on a website, a customer feedback book, etc.)  
Do you think it is important to receive feedback from your customers?
- Do you have an employee motivation program?  
Do you think it is important to have such programs? Why?

Now I will show you a new mobile application idea concept. We are going to discuss the idea itself and its functions. We are not going to discuss the implementation. Please have a look on the file.

#### TESTING THE MOBILE APPLICATION CONCEPT

**THE PROCEDURE:** *The moderator demonstrates the concept (sends the file), after reading, he or she invites you to participate in the discussion.*

*All possible attention is given to “deeper” issues.*

Now I will show you a new mobile application concept. We are going to talk about its content. We are not going to evaluate the performance.

- Spontaneous response:** what will you say? Please give open responses. What associations do you have? What ideas and emotions does this concept evoke?
- Function comments:**
  - Do you think people would use Pre-order food function at your restaurant?
  - Would you like to use our loyalty programs with the discounts for your loyal?
  - One of the key function of the application is instant order payment without waiting a waiter to come.
  - What do you think about this function? Would it be suitable for your type of the restaurant?
- Common perception:** what do you think of this app in general? Please explain your opinion.
- Creativity and innovation:** Is this concept unique and different from other applications for cafes / restaurants? Have you ever seen other concepts similar to this one (not necessarily for cafes / restaurants)? If yes, which ones?
- Relevant audience:** can you say that this application is suitable for your cafe / restaurant? Why? Please explain.
  - What features seem to be more interesting? Why? On the contrary, what features seem to be less interesting?
- Strengths and weaknesses:** What are the strengths / advantages of this mobile app and what are the weaknesses? Do you have anything to add?
- Motivational potential:** having seen the concept might it be interesting for you: to learn more about this application, to use it in your business? Why? Please explain.
- Suggestions for improvement:** What would you like to change in this application to make it more interesting for you?
  - (Do you consider all the functions specified in this version of the application relevant? What other features might be useful for your business?)
- Product price expectation:** How much do you think this application might cost? (its implementation throughout your business) a month / a year.
  - My questions end there. Would you like to add anything else?

Thank you very much!

## APPENDIX 2 Interview materials: The mobile app functionality



### App services for Visitors



#### PLACE SELECTION

Access personalized recommendations, restaurant descriptions, photos, and multiple filters in the search.



#### PAY BILLS WITHOUT WAITING

Order food and drinks before arriving at the place via app to reduce the waiting time.

#### TABLE BOOKING

Reserve a table in a couple of touches with a number of guests and special requests.



#### BONUSES AND PROMOTIONS

Receive discounts and promotions to exchange and pay for your new orders.



#### PRE-ORDER

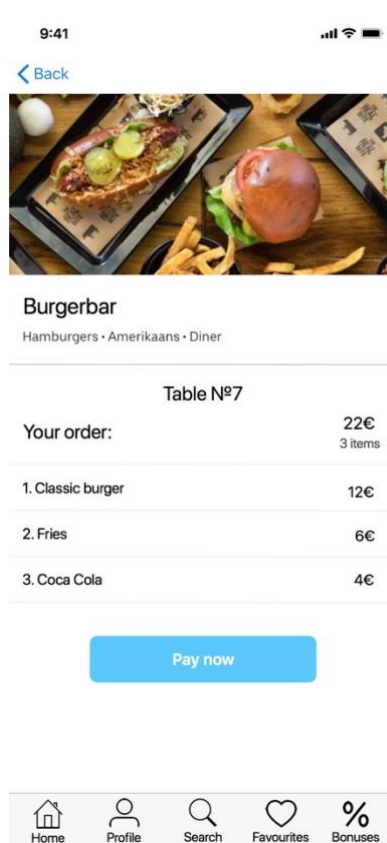
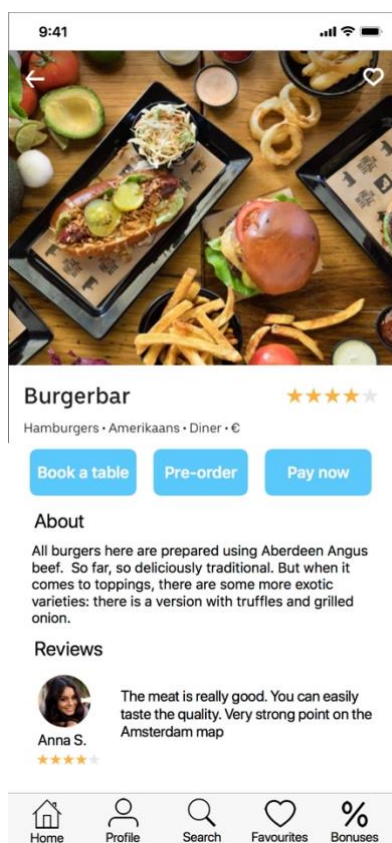
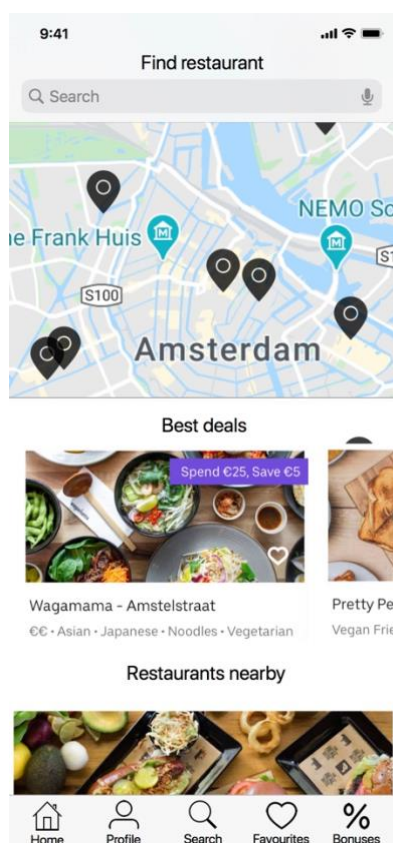
Order food and drinks before arriving at the place via app to reduce the waiting time.



#### CASHLESS TIPS

Leave a tip to the waiter even if you do not have cash. The money will instantly come to the waiter.

## APPENDIX 3 Interview materials 2: Application interface design





#### APPENDIX 4 Interview Transcripts, Juli

Interview for restaurant owners and managers:

Please, introduce yourself and briefly tell us about yourself: what is your name, how old are you, your education.

- *My name is Juli Nikitina, I am 34 years old. I have an incomplete higher education - Kaliningrad State University. I studied at the Faculty of Advanced Studies and subsequently transferred to PR and Social Relationships.*

Where, in what institution do you currently work (at what position and for how long have you been working)? In which / what institutions did you work before this time?

- *At the moment, I am the owner and director in one person of my business - Coffee Some Time. I also do consulting separately, I also have my own company in the field of strategy, marketing and business analytics.*

How many guests do you usually have per day?

- *The restaurant business is a week-long story. In the location of Amsterdam, an average of about 200-3000 visitors per day, but this varies greatly from weather conditions, children's holidays, weekends.*

Is the restaurant often empty?

- *There are days, when the attendance is very small. For example, recently, when the Netherlands were hurricanes, in general the statistics of attendance in the cafe dropped by 70%. In general, if everything is fine - the weather is fine, there is no vacation, then the restaurant is not empty.*

When is the flow low?

- *In children's holidays, since the Dutch are very family people. Also, in bad weather - during a storm or heavy rains.*

How do you track the number of guests? And their order history? When is the flow low?

- *In children's holidays, since the Dutch are very family people. Also, in bad weather during a storm or heavy rains.*

How do you track the number of guests? And their order history?

- *I use the convenient Software - Light speed system for analysis in conjunction with the Izattle bundle. Izattle makes credit card payments. It allows you to keep track*

*of returning customers, who paid the same card. Izattle also sends a check to the client's mail, creates a client base and sends emails to visitors. Izattle is a very handy tool. Just in bundles I used the software, which I designed myself to predict, where I downloaded the data and making forecasts. It was very comfortable and practical.*

*Light Speed, in turn, gives a lot of statistics on the execution of the order. They have the function of Kitchen display, which displays the order in the kitchen on the other device. Subsequently, this saves the transfer time of the order and gives very clear statistics (accurate statistics). Moreover, this function displays how quickly your staff takes orders, how long they spend time at the table - talking with a client and how quickly they prepare an order. For example, when the coffee entered the cooking - barista has to click once prior to preparing the beverage, and twice, when the beverage is ready. Thus, you can see how much a barista makes a drink per hour. This allows you to define, who is in the team carries out orders faster, and someone slower. The system also allows you to group the order for ease of preparation.*

*Speaking of statistics, then it is grouped by the number of orders per day, per hour. Also, the application gives the most and least popular names in the menu.*

*At the end of the month I have downloaded applications from the statistics for analysis, where she had seen, that sells better, and that less. Also, sometimes the team and I analyzed for what reason the position could not be sold. For example, the incomprehensible name of the drink. Further, the data I added to the forecast for the application, to make the prediction of the next month, taking into account holidays, weekends and holidays.*

Is the restaurant often overloaded?

- *There are not many specialty coffee places in the Netherlands and they are very heavily congested. In Coffee some time, there was even a line for landing, as there is not so much space in the Dutch cafes, so over time I had to make tables, change guests, ask to group, and sometimes leave - if guests sit for several hours.*

What difficulties and difficulties of doing business do you face?

- *The biggest difficulty from my experience is the distribution of the budget, work with staff and balancing the costs associated with staff.*



*The Netherlands has very serious labor protection systems and workers have very high salaries. The staff is very protected, and you as an employer are completely gone. Approximately 40% is the employment cost, which sometimes exceeds rental costs. You have certain obligations to the staff, even if they work on zero contracts. Of course, this type of contracts can reduce costs - for example, to send workers home, if it happened, that in cafes absolutely empty, but you have to change 3 baristas, then you can do it to save hours. But you cannot do anything if someone - something, for example, fell ill, and in the Netherlands, it happens often due to weather conditions. Therefore, predicting the business plan is very important to lay the 30% to the costs (cost) personnel.*

*Also in the Netherlands, many are very serious about their work, the market is very young and the professionals, who see themselves in the Horeca very little, and who have - they want fabulous salaries, which you cannot offer, based on your income and expenses. Workers can be rude or late for work, but under the law you cannot fire a person right away and you have to manage with warnings.*

*But in general, the business is quite clear and pleasant. Of course, sometimes conflicts arise with guests, but this is also found in other businesses.*

If not called: are there any difficulties with customer retention? How do you attract new customers? And in what ways do you keep the old ones?

- *Work with the client and building a loyal customer base plays an important role in this business, and especially in the Netherlands. Amsterdam is a small town, all very local people, who will come to you every day - live nearby, in your area. They will be about 30% of your income and, again, this is the audience, which will not allow your site to be empty, when a hurricane outside. Therefore, it is important to build relationships with your guest. That's how you do it, it will depend on the location and with whom you work. For someone - it's free coffee as a little bonus, for whom - it cards, email newsletter, or heart in Instagram. Here, deep, strategic marketing, even for a small institution, is very important.*

How do you attract new customers?

- *Since I am a strategist and analyst, I am making a two-year strategy for my business. The first year of business is considered zero. At this time, testing will be held: people will come at once, so it is almost impossible to analyze this year.*

*In the first year, customers are attracted by the first "hype". It is very important to have an opening party, invite influencers. Then people begin to come to*

*themselves, because they need content, bloggers should also be about - something to write: where to go, what to do. Here the strategy is already beginning to work on hold, because people come*

*for the first time, they have a lot of questions.*

*Further it is important to work with feedbacks. All my staff for the first 3 months captures absolutely all the reviews. They go with the phone, and as soon as the customer has paid, they ask, that you liked / what is not. The more sincerely you will communicate with your guest and arrange him to share even negative feedback, the better it will be for your business.*

*It is very important, so that the visitor is back again, for that work fine gift cards for free coffee, guests lists on Testing coffee. That is the first time the cafe should work on guest retention and their feedback, but you need to set a specific filter, because some people never come back to you does not matter, what you did or not. These are people, who live in another city, and they accidentally stopped.*

Are there any - the loyalty program? Tell me more? Do you find this loyalty system effective? Why?

- *We used to have coffee cards, but I do not believe loyalty programs. Therefore, I did not want to do it, as a rule we had one-time offers. Since the capacity of the cafe is not very large, as a rule, the entire space is occupied, so we do not really need such programs in the framework of Coffee some time.*

What other methods of attracting/retaining customers do you use?

- *In the first six months, we have focused on attracting and retaining visitors, tried, to guests like us. I did various promotions through Instagram: breakfast /coffee.*

*My personal extended networking and connections also help me a lot. Probably, it will not be even talking about business without this base. In my career, I have many friends of bloggers, millionaire bloggers from England, France and Holland. They often come in the cafe and publish it - something in his social networks. So often I had nothing to do, so the place was advertised.*

*We also had postcards for a one-time attraction of people in the district, I also made meetings for neighbors. I cannot share all the secrets.*

Is there feedback from your customers? Which one? (Personal statements of customers, reviews on the site, a book of complaints and suggestions, etc.) Do you consider it important to receive feedback from your customers?

*Barista recorded address to send email to any invitation or mailing - the news. We communicate actively on Instagram - asked feedback from visitors. We worked in google maps reviews, trip adviser. Also in the cafe, we had a phone number so that guests could call and tell their opinion. But it didn't work, and I removed it. I think, it is very important to get feedback. Without this, it is not clear where your business is developing, and it is impossible to see the whole picture on just one statistic. Therefore, live contact is very important.*

Does your institution have a staff motivation system? Do you consider the availability of such systems important? Why?

- *Very important. Many in Horeca do not take this issue seriously, as this market in the Netherlands is not sufficiently developed (Immature).*

*This work is difficult physically and emotionally, you need to be able to talk with guests and be polite. If the staff feels, that he would not like - then encouraged for their work, as a rule, this can lead to that the staff is rude with guests, when they are tired or not in the resource.*

*We have meetings with staff every 2 weeks, where we discuss their successes, future plans, as well as what bonuses they would like to receive and what we would like to improve. Sometimes, as a bonus, I give staff extra days off, because these are difficult working days, and they would like to spend time with partners. Sometimes we agreed, that in the end of the month I buy (the company - gives) a - is a gift to the limit of 50 euros. For someone, the main motivation is the extra hours per month - so that earnings are higher. This is a very individual work with everyone. I mean for every worker I have a file, where I write down their wishes, preferences. I also take feedback about myself, because this is your family.*

#### TESTING THE CONCEPT OF A MOBILE APP

**Spontaneous reaction:** what do you say? Speak in free form. What associations arose? What thoughts, emotions do this concept evoke?

- *I do not understand, that this Point of sale or not. And this is the first question. I worked POS Lightspeed, which cost 120 euros per month. He offers many functions from these: customer feedback. This is a very strong start-up, which is rapidly developing first thoughts - very cool, but then it is not clear, how it works? In which bundle? Is it like marketing anymore or is it additional or main? The severity of the need to understand the niche, where the application gets Fundamental. These functions are not new, so it is important to understand your*

*marketing advantage in general for the market. I really liked the self-pay feature, I think it is very convenient.*

**General perception:** How do you generally evaluate the idea of such an application?

- *The Horeca market is small or medium. In connection c so, that a lot of restaurants do not forget, that most - a family business, where the cash register will be people aged, whose idea about the application can be intimidating. There are many start-ups are now, for example: Rituals, which work together with juices & brothers, it allows you to order and pay for a dish and drink in to what that clear time and then run off and pick up. This is a very convenient feature. It's also difficult now to make an informed user download a new application, since we already have a lot of applications on phones, so the functions must be very convincing. Of course, you should create a trial version of the application, in order to clearly understand, whether the application is urgent.*

**Originality, novelty:** Is this concept unique, unlike other applications for cafes / restaurants? Have you encountered the concept, similar to this (not necessarily related to the cafes / restaurants)? Which ones?

- *No, have not met. That - something like that I saw in the beauty industry. I think, that it is quite a unique product and a unique concept. It seems to me that it's still important to think over the function of the "loyalty program" and make it flexible for different businesses.*

**Relevance audience :** if you can say, that this application is suitable for your cafe/restaurant ? Why? Explain.

- *Since Coffee Sometime young and modern business, designed for Milenials the young and advanced audience, which goes with the phone as with his third hand the more statistics we receive and collect - the better. Many businesses try to rely on statistics, numbers. So, for my place this would be a cool application.*

What features (items) seem more interesting? Why? And which, on the contrary, are less interesting?

- *I would be interested analytics products, orders, how fast the order was made, a card who paid (it's more Pos System). The self-payment system through the application is very interesting, I myself love to do it. This increases speed and efficiency. So, the pre-order function is very interesting. This is very convenient,*

*especially when you work and your break is only half an hour. This will be especially true for cafes in business districts of Amsterdam.*

Less interesting - guests' information is not very relevant in Holland. People here are obsessed with privacy and privacy. Therefore, it will not be particularly valuable as a separate function.

*Marketing automation is very individual, especially in horeca - it is very painstaking and scrupulous. You need to analyze your flows and statistics. It might be better to call it as "Marketing Insights" or "Advanced Marketing tools", but not automation - it may, on the contrary, scare you off a bit. The Dutch also love to control everything. So, if you had a tool for planning and forecasting for the same marketing and public - the notification, it would be very much attracted customers. Very practical download holiday calendar and see, who have - the days will be colored green - showing, that Easter today, and what - the advice will be given. So, it will help restaurateurs to predict and plan the next 6 months' plan, what will need to be done from the marketing side. That is, as some kind of analytics / marketing bundle, so that it is somehow applied.*

**Motivational potential:** Can after they met with this concept you have a desire - the action (learn more about this application, embed it in your business). Why? Explain.

- *Not yet. The picture, which you showed me quite crude, perhaps, need some - some thought the pitch. But still, I knew now, during our dialogue is, of course, of interest. You will need to think about how to start, connect and work very verbally. That is, time will pass while they are interested in this.*

**Expectation regarding the cost of the product:** How much do you think such an application could cost? (its implementation in your business) per month / year. This ended my questions. *Is there anything to add on the topic of conversation?*

- *Well, look, I pay for Light speed 129 euros and Izattle charges 1 / 1.5% of the transaction depending on the amount of payments. A similar tool I would pay about 20 euros per month. That is, you have two ways: the percentage of sales through offers or as a monthly subscription.*

Thank you very much!

APPENDIX 5 Interview transcript Valentine

Interview for restaurant owners and managers.

Please introduce yourself and briefly tell us about yourself:

What is your name? Where do you currently work? What is your position and how long have you been working there?

- My name is Valentine, I have a restaurant in the center of Amsterdam "T Singeltje Pancakes" in the Flower market. My father is the owner and I am managing it, so I am co-owner. We opened last year in June. We serve breakfast, lunch, and dinner.

How many guests do you usually have a day?

- It depends on the tourists, as we located in the tourist part of the city. So, 90% of our clients are tourists. On the weekly base- as we have around 60 visitors a day and double number (120) on the weekdays.

How often is the restaurant completely full? What time (during the day) do you struggle massive customer flow? Is the restaurant often empty? When is the customer flow poor?

- Depending on the month. During the summer and springtime, we're very busy on Fridays, Saturdays, Sundays, and Mondays. We always have a full house these days. The other days are quieter, but we still have guests.

Is the restaurant often empty?

- We do have some quiet months. January due to after Christmas time and September and October due to after summer break period.

How do you track the number of guests and their order history?

- We don't track the number of guests, but at the end of the day, we finalize how many pancakes and dishes we have sold. This is how we make estimations of how many guests we had.

What difficulties do you face doing business?

- Attraction of the local people. We try to get more attention from the local people because Dutchies do love pancakes, but they just need to see as a local place. Become busier during the quite month, and obtain more marketing attention.

If not mentioned above: are there any difficulties with customer retention?

- Yes, we do. As we located in quite a tourist place, there are not many local people around. So, we need to make the place somehow more attractive for the locals, so

they would just come for the product and the place, without minding the touristic area.

Our Staff members speak all kind of different languages, which is very good as for tourists as well as for Dutch people.

How do you attract new customers?

- Social media. We create eye catching content. We also used to contact influencers. Nowadays, the interests turn and now they are contacting us.

We have an advertising page on the Amsterdam page, which is also quite helpful for the attention of the locals and tourists.

Also, we collaborate with the Amsterdam Food guide. They share different food spots in Amsterdam, which is also nice for promotion among influencers and local people. Besides that, we also work with hotels in the neighborhood. They promote our restaurant and we have a special offer for their guests.

What do you do to retain the old ones? Are there any loyalty programs? Please tell us more about them.

- It could be possible, but right now not really.

Do you find this loyalty program effective? Why?

- I am not sure. Tourists do come back to our place, and since 90% of our guests are tourists, it's difficult to estimate when they return to the place. It might be in a year or a couple of months because they are traveling and they do not know if they come back. So, in the end it won't be on a regular base.

What other methods of attracting / retaining customers do you use?

- Well, we have Instagram, we do a nice visual presentation of our dishes so people can post and tag us. Also, our interior is visual: painted windows, united colors, so it is attractive to come inside and look at what kind of food we're offering. We sometimes put our menu on the street with the picture, and we noticed that it is a good attractive tool for people to come inside and order.

*Do you ask your customers for their feedback? Do you think it is important to receive feedback from your customers?*

- *I think it is very important. It is very cool when people can share their opinion, as everybody is different, though it's always a challenge to match everybody's expectations.*

*When we bring the receipt we always ask for the reviews. We're bringing a card with the "Thank you" note, on which we also ask for the feedback. So, if visitors want they can return the card right away with the comments on it. It is important as we're still starting this business and for us, it is crucial, as we can make adjustments and change things for a better.*

*Also, we get reviews on TripAdvisor and Google or email. We react on every comment even if they're negative ones, as it is something from what we can learn from. We discuss the comments with the team and decide how we can make things better.*

How do you collect it?

- *We have a feedback card, which we bring at the end of the meal with our social media accounts. It works very well. We get a lot of positive feedback.*

*Also, people commented that music too loud, so these kinds of things are good to know. You need to have those people who complain, as this is how you know when you need to change things.*

Do you have an employee motivation program? Do you think it is important to have such programs? Why?

- *No, not really. Since we're not a big team and we're very close. What we do – we sometimes have diner together or we do different activities. I do not see a point of having a program, as we are such a small team. We are talking daily with each other and we have a group chat.*

*So, for now, it is pretty ok, I don't feel like it at the moment, but maybe in the future when we have a bigger team. Now, I will show you a new mobile application idea concept. We are going to discuss the idea itself and its functions. We are not going to discuss the implementation. Please have a look on the file.*

## TESTING THE MOBILE APPLICATION CONCEPT

Now I will show you a new mobile application concept. We are going to talk about its content. We are not going to evaluate the performance.



**Spontaneous response:** what will you say? Please give open responses. What associations do you have? What ideas and emotions does this concept evoke?

- *I do like the overall idea of the app and I think it could really work.*

**Function comments:**

*Do you think people would use Pre-order food function at your restaurant?*

- *That would be possible at our restaurant. If there is a time frame for the order to be cooked and a guest to come, so it should be somehow integrated to avoid cold food.*

*Also, for this function would be good to have an option to accept/decline option for a restaurant side. Because let's say if there are no free tables within 10 min, so you cannot accept the order. Additionally, cancellation regulation. Let's say if a customer wants to cancel an order, it can be made within a particular time because otherwise, it will cost money.*

*As well as from the visitor point of view: if I want to pre-order I want to be sure to have a table to sit. So, this function can be just with a few things clear.*

Would you like to use our loyalty programs with the discounts for your loyal?

- *Yes, of course, we can have that. If we have people visiting us a certain time, then we can have a special deal for them.*

One of the key function of the application is instant order payment without waiting a waiter to come. What do you think about this function? Would it be suitable for your type of the restaurant?

- *Well, I don't know to be honest. We are very personal with our clients. We always chat with them. I think it might a bit impersonal to exclude a waiter's interaction at all. It will make the visits one-sided, and it is not our goal. We want to provide a nice experience, a cozy and friendly atmosphere through a personal connection. Moreover, the moment of bringing a receipt is very important as then we receive final feedback, making sure everything went fine and the guests liked everything.*

*Maybe this feature would be nice for a food chain, where it often gets busy and people just want to go there for the food. Then maybe this might be an option, but for us, the connection is very important, as we are very small.*

**Common perception:** what do you think of this app in general? Please explain your opinion.

- *I can definitely see it working. Especially from the user side. Quite often while eating out I don't like to wait for a waiter, because it taking too long when it is busy. So, the app can be very handy. Especially during the summertime, it would be great. Let say if you want to go to a place, where you're able to pre-order food or drinks and your order is accepted. Then it can be a very cool idea!*

**Creativity and innovation:** Is this concept unique and different from other applications for cafes / restaurants? Have you ever seen other concepts similar to this one (not necessarily for cafes / restaurants)? If yes, which ones?

- *The app reminded me a bit of the deliveroo app, but it is not a negative comment. I think it is actually nice, because people know the area, so they will easily understand the interface and usage. So, it will be very cool. I think how easier it looks the better it is.*

**Strengths and weaknesses:** What are the strengths / advantages of this mobile app and what are the weaknesses? Do you have anything to add?

- *Weakness would be missing personal contact. A good point: speed up working process, and data collection with the results. I also liked the pre-order function.*

**Motivational potential:** having seen the concept might it be interesting for you: to learn more about this application, to use it in your business? Why? Please explain.

- *I would certainly like to use the application as an additional promotional platform for the restaurant as well as its function as pre-order. Though, I don't see self-payment features that would suit this restaurant concept.*

**Suggestions for improvement:** What would you like to change in this application to make it more interesting for you?

- *The pre-order option should be improved with the cancelation possibility and time regulations. As restaurateur will need to estimate if they can provide tables for coming guests.*

**Product price expectation:** How much do you think this application might cost? (its implementation throughout your business) a month / a year.

- *Maybe it can cost the same amount as Deliveroo charges. But I think that the tip should be 100% for the restart owners. So, the commission is on part of the total amount and the tip is like 100% for the owners.*

Thank you very much!

## APPENDIX 6 Interview transcription – Juan

**INTERVIEW FORMAT**  
**FOR RESTAURANT OWNERS AND MANAGERS**

Thank you for agreeing to today's conversation. It will take about 30 minutes. Our conversation will be held in an interview format - I will ask questions, and you will answer them. I may interrupt you, I apologize for this in advance, this has to do to the fact that I understood your idea, and we meet the timeline.

During the conversation, with your permission, audio recording will be performed. This is done to ensure that no details of our conversation are missed. This record is then decrypted, translated into text and used to write a summary report. All data will be used in a generalized form, without specifying personal data of respondents.

There are no right and wrong answers. It is **your** opinion, ideas and experience that interests me, so do not be shy and say whatever you think is necessary. Important to emphasize that the results of the study will depend on this information.

RESPONDENT PROFILE. INTRODUCTION.

- Please introduce yourself and briefly tell us about yourself:  
What is your name? Where do you currently work? What is your position and how long have you been working there?

*My name is Juan Panetta, I am 37. I am the restaurant manager at the Hoxton hotel in Amsterdam. I have been working there for 4 years and 6 months. I started as a waiter and after continued as a manager.*

- How many guests do you usually have a day?

*Well, being a restaurant from a hotel, we serve breakfast, lunch, and dinner. The courses change every day.*

*We are very local, we are located in a nice street, so besides the hotel guests, we also get many neighbors. Let's say on a busy Saturday and Sunday we can have around 150 -200 people just for brunch and then we have another 150 for a busy Friday or Saturday. From Monday to Friday breakfast and lunch cover the number a bit lower, but we can still go for an average for 200 courses a day.*

*The number of courses is changing within the season. Thus, for summer it's way lower and for winter it is the way busier.*

- How often is the restaurant completely full? What time (during the day) do you struggle massive customer flow? Is the restaurant often empty? When is the customer flow poor?

*Definitely. I would say there are some gaps when it is empty: Monday, Thursday from 10 to 11- the gap between breakfast and lunch and 16:00 to 18:00 gap between lunch and dinner.*

*Also, when it is summertime, the weather is nice Dutch people like to sit on the terrace, which we don't have, so our service can be very quiet except for the 10 Pm till 4 AM.*

- How do you track the number of guests and their order history?

*- Definitely. We do not assign it to guests, but every day at the end of the shift we send a report to the company, once we established how many quests we had during the day.*

*The restaurant is divided on different areas: restaurants, service and meeting/event space. So, we split the number of guests between those revenue centers. We can access the track of breakfast, lunch and dinner, but we would do that monthly, in which we see the number of guests.*

- What difficulties do you face doing business?

*Being open for 4 years we achieved some sort of consistency when it comes to terms of product. The most challenging part for the business are:*

- *change of the season, which has been contemplated with our budget and team.*
- *turnover of staff. We have many young students, who works just for few months, for several hours per week. So, in Amsterdam in particularly it is very hard to achieve standard team. We managed to do that at the most senior positions and in the full-time teams, which are the core of the business.*
- *Once everything is sorted then is just is to upsell more. To get people spend more money.*

- How do you attract new customers?

*We do some activations time to time, but not that often as we want our service to speak for itself.*

*On Sunday, we have Jazz bands playing at our restaurant in the afternoon. This turned out to be a big success.*

*Also, we do activations with the hotel: offering breakfast and bed for a room.*

*We do not do that many PR activities: we do not invite influencers that often, but we do get full-writers, food critics a few times per week. But again, we want our service to be organically attractive.*

- What do you do to retain the old ones?

*Are there any loyalty programs? Please tell us more about them.*

*No, we don't have right now official loyalty programs. However, there is a kind of loyalty program that is not written. For instance, when we see a regular guest, we do value loyalty, so we would give them a free drink or take care of them. So, it is not something standard, it is undergoing thing that goes every day.*

- Do you ask your customers for their feedback? How do you collect it?  
Do you think it is important to receive feedback from your customers?

*All the time. That's is the key to our service. We always check how the food is delivered, the manager talks with the guests to make sure that everything is on track.*

*With the regular guests, we can even sit down for a bit and ask for their feedback. That's is very helpful, because they know the product and service in general so it is a good way of checking.*

- Do you have an employee motivation program?

Do you think it is important to have such programs? Why?

*We do. Yes, it changes with the season. But we have more on a day to day basis. we try to do something more long term, like a three-month program. But unfortunately, we drop it because of some other issues that were more important at the time.*

*We as managers always keep track of dispenser for a waiter and try to encourage those who is doing great, and push hose who are not doing that well. So, there's no established program, but again it is day to day thing. If you send the more specials, you get a bottle of wine.*

## TESTING THE MOBILE APPLICATION CONCEPT

***All possible attention is given to “deeper” issues.***

Now I will show you a new mobile application concept. We are going to talk about its content. We are not going to evaluate the performance.

- **Function comments:**

Do you think people would use Pre-order food function at your restaurant?

- *I think it could work for some restaurants. It would very appealing for smaller places. But I don't see it happening in the in the way of service that we provide. I think this concept would work for a small business because it adds value and it can drive sales better.*

*However, we at Hoxton aim to have face to face contact with our guests.*

Would you like to use our loyalty programs with the discounts for your loyal?

One of the key function of the application is instant order payment without waiting a waiter to come. What do you think about this function? Would it be suitable for your type of the restaurant?

- I think yes, it is something interesting. Of course, the technical part must be arranged. But I see it as a positive thing. Giving our POS system probably it will help to see when someone pays or not, so you still need the human connection to say, yeah, you know, it's paid.  
But it is definitely doable and positive.

- **Common perception:** what do you think of this app in general? Please explain your opinion.

*- I think it may be useful application. It has many good ideas.*

*I am not seeing using it Hoxton restaurant, but that's again based on my understanding of business. And I see more like an extension of TripAdvisor. You know, people when they go out, they open Google search for restaurants nearby and there you could have a chance to book a table, so it is definitely an innovation as well as pre-order.*

*When it comes to the data base or loyalty programs, I think many restaurants they have that already running in one platform (TripAdvisor, OpenTable.). So those platforms are already giving you out the data base of your guests. So, if there is a chance to link with those apps and then add it ten it would be great. Because I think it is good to rely on services that are already out these, like Google and trip Advisor.*

- **Creativity and innovation:** Is this concept unique and different from other applications for cafes / restaurants? Have you ever seen other concepts similar to this one (not necessarily for cafes / restaurants)? If yes, which ones?
- **Relevant audience:** can you say that this application is suitable for your cafe / restaurant? Why? Please explain.
  - What features seem to be more interesting? Why? On the contrary, what features seem to be less interesting?
- **Strengths and weaknesses:** What are the strengths / advantages of this mobile app and what are the weaknesses? Do you have anything to add?
- **Motivational potential:** having seen the concept might it be interesting for you: to learn more about this application, to use it in your business? Why? Please explain.
- I think it a cool app for a small or medium restaurants, which want to boost their sales and increase people flow.
  - *As for Hoxton concept, I don't see it working. But again, it's not about the application, but we get many offers all the time about different ways to improve our business. But you want to keep it as simple as it is. Which is still not that simple: we have like, five or six different platforms for managing-everything in the office, reservations, performers, guest database. We like always to keep it as simple as possible.*
- **Suggestions for improvement:** What would you like to change in this application to make it more interesting for you?
  - *I think the layout is already very appealing, very to use, it has some Ubereats or TripAdvisor feelings. Looks easy and intuitive, which is very nice. I think the concept and the idea is good. It is innovative and I don't see much to change it.*
- **Product price expectation:** How much do you think this application might cost? (its implementation throughout your business) a month / a year.
  - *50 euros a month + the number for each guest that the app get the door. Some platforms charge you 0,5 cents or 1 euro per person, so not based on sales but based on number of people coming in.*

My questions end there. Thank you very much!

## APPENDIX 7 Interview transcripts Filipe

Interview for restaurant owners and managers

RESPONDENT PROFILE. Please introduce yourself and briefly tell us about yourself:

What is your name? Where do you currently work? What is your position and how long have you been working there?

- *My name is Filipe and I am the manager of House of Watt restaurant near Amsterdam Amstel station. I have been working here for about one year*

How many guests do you usually have a day?

- *On average, we have about 300 people a day, on weekends and holidays there are about 500 people. Of course, it depends on the season and even on the weather outside, in the Netherlands it often rains and we have fewer clients during the rain than in sunny weather*

How often is the restaurant completely full? What time (during the day) do you struggle massive customer flow? Is the restaurant often empty? When is the customer flow poor?

How do you track the number of guests and their order history?

- *The restaurant is not often full. For example, in the morning or in the afternoon we don't have many people. Many people come to us during lunch, as there are many offices around us. And on weekends, especially in the evening, people even sometimes wait for a table for 20-30 minutes. The restaurant is rarely empty, in the mornings we have very few customers, but still we have regular guests from the houses nearby who go to our place for breakfast. In our POS system, we can see the number of orders and what people ordered, for example, which dish was ordered in general the most and least*

What difficulties do you face doing business?

- *It is hard for us to find new customers; our restaurant is a little hidden among the houses and some do not know that our restaurant is here. We tried to advertise, but it did not greatly increase the number of people.*

**If not** mentioned above: are there any difficulties with customer retention?

How do you attract new customers? What do you do to retain the old ones?

Are there any loyalty programs? Please tell us more about them.

- *Sometimes we see new negative reviews on Google Maps and we try to correct defects. Some regular visitors sometimes stop visiting us, I don't know the exact reasons for this, maybe they didn't like the dish or they moved to another area*

Do you find this loyalty program effective? Why?

- *We do not have it.*

What other methods of attracting / retaining customers do you use?

- *We tried advertising on the Internet and on billboards nearby, but this advertisement did not significantly increase the number of visitors*

Do you ask your customers for their feedback? How do you collect it? Please give details. (Personal feedbacks, reviews on a website, a customer feedback book, etc.)

- *We hang on the exit lettering with a request to leave a review about the restaurant. But we cannot stop a person and make him write a review*

Do you think it is important to receive feedback from your customers?

- *I am sure that yes, for us, the question is rather how to get customers to write reviews. Many just come and go. But we welcome any feedback of course*

Do you have an employee motivation program?

- *Yes, we have a wage indexation program, we try to note the efforts and initiative of employees, we listen to their requirements and wishes*

Do you think it is important to have such programs? Why?

- *Sure, this helps to retain employees, motivates them to do their job better.*

## TESTING THE MOBILE APPLICATION CONCEPT

The procedure: *The moderator demonstrates the concept (sends the file), after reading, he or she invites you to participate in the discussion.*

### **Function comments:**

Do you think people would use Pre-order food function at your restaurant?

Would you like to use our loyalty programs with the discounts for your loyal?

*One of the key function of the application is instant order payment without waiting a waiter*



to come.

What do you think about this function? Would it be suitable for your type of the restaurant?

- *The pre-order feature seemed very interesting to me. Many of our customers are in a hurry, they are late for a working meeting and so they can order food in a restaurant and eat it, since when they come to the restaurant the food will be ready.*

*The loyalty program sounds interesting, we thought to launch our program, but we had difficulties with it, because all these needs to be ordered, set up and etc.*

*Probably instant pay is a convenient function, but then we must be able to distinguish between who has already paid for the dish and who is waiting for the waiter. On the other hand, if we will see everything in our POS system, then the function will be convenient.*

**Common perception:** what do you think of this app in general? Please explain your opinion.

- *I liked the design and the main idea of the application. I think that in general there are no similar to this application now, someone does the delivery, someone shows the rating, but nowhere is there any way to immediately place an order or pay*

**Creativity and innovation:** Is this concept unique and different from other applications for cafes / restaurants? Have you ever seen other concepts similar to this one (not necessarily for cafes / restaurants)? If yes, which ones?

- *I saw Uber Eats, they also show restaurants, but their functionality is different from what you offer. If a lot of people will use your application, then it will definitely bring benefits and probably new customers to the restaurant*

**Relevant audience:** can you say that this application is suitable for your cafe / restaurant? Why? Please explain. What features seem to be more interesting? Why? On the contrary, what features seem to be less interesting?

- *Yes, I think your application would be useful for our restaurant. I liked the pre-order function most of all, since we are located near offices and many are in a hurry and this function could attract more people. Also, the feedback function seems convenient to me.*

**Strengths and weaknesses:** What are the strengths / advantages of this mobile app and what are the weaknesses? Do you have anything to add?

- *Your application seems very interesting to me and offers useful features for customers, which will help restaurants. Of the weaknesses, I would note that you need to find a large number of users to make the application popular*

**Motivational potential:** having seen the concept might it be interesting for you: to learn more about this application, to use it in your business? Why? Please explain.

- *As I said before, some functions can really be useful to us, so I think yes, I would like to know more*

**Suggestions for improvement:** What would you like to change in this application to make it more interesting for you?

- *I would like for us in a restaurant to immediately understand who wants to pay through the application, and who is waiting for a waiter, to see all this in the POS system so that everything is clear.*

**Product price expectation:** How much do you think this application might cost? (its implementation throughout your business) a month / a year.

- *It depends on how many customers it will bring to us and how many people will use this application. But so, I am ready to pay for it around 100 €*

My questions end there. Would you like to add anything else?

- *Wish you good luck with your project!*

## APPENDIX 7 Interview transcript Elsa

## INTERVIEW FOR RESTAURANT OWNERS AND MANAGERS

Thank you for agreeing to participate in the interview! Please answer the questions below.

There are no right and wrong answers. It is your opinion, ideas and experience that interests me, so do not hesitate and write whatever you think is necessary. Important to emphasize that the results of the study will depend on this information. The data will be used in a generalized form, without specifying personal data of respondents.

## RESPONDENT PROFILE.

Please introduce yourself and briefly tell us about yourself:

What is your name?

- *Elsa Bakker, 33 years old. I did Hotelschool after that I started to work for accor hotels, I worked there 4 years. After that I started as general manager for The Seafood Bar*

Where do you currently work? What is your position and how long have you been working there?

- *Current position is operations manager. I work 4.5 year for the company. started as general manager at our Spui location*

How many guests do you usually have a day?

- *I manage 3 different locations: Van Baerle: 300-500 guests per day; Ferdinand Bolstraat: 200-400; Spui: 600-1000*

How often is the restaurant completely full?

- *Van Baerle: high season, full all the time. Low season: 2 times a day;*  
*Spui: high season: 4 times. Low season: 2 times a day*  
*Ferdinand Bolstraat: 200-400: high season: 3 times. Low season: 0 times a day*

What time (during the day) do you struggle massive customer flow?

- *For all locations: between 19.30-20.30*

Is the restaurant often empty? When is the customer flow poor?

- *During lunch at Spui and Ferdinand bol especially during the week. All locations between 16-18*

How do you track the number of guests and their order history?

- *We are using data from Nostradamus and Unitouch it gives overviews of articles sold and number of guests. revenues and number of guests gives information about average spending per guest*

What difficulties do you face doing business?

- *Making sure all dishes are the same in portioning and presentation. Managing teams with new generation managers and employees*

How do you attract new customers?

- *Especially via tripadvisor (check our reviews, there are quite a lot), social media and events*

What do you do to retain the old ones?

- *We have a lot of regular guests, they keep coming because of recognition and because of the service, prices and products. Complaints are handled very seriously.*

Are there any loyalty programs? Please tell us more about them.

- *No*

Do you find this loyalty program effective? Why?

- *Yes, I think it works great for guests and employees. Guests feel really appreciated and employees can recognize guests. We still haven't found the right program.*

Do you find this loyalty method effective? Why?

- *Yes, it works OK. But I think we can do more.*

How much do you spend a year / a month on a loyalty program? How do you evaluate the cost-effectiveness balance of the program?

- *We are spending nothing. We only have our social media costs and they vary*

Do you think it is important to receive feedback from your customers?

Do you ask your customers for their feedback? How do you collect it? Please give details. (Personal feedbacks, reviews on a website, a customer feedback book, etc.)

- *We are asking guests to give feedback via e-mail and tripadvisor when they enter our wifi.*

Do you have an employee motivation program?

- *We give our employees 25% discount when they have dinner. When they work 1,2,3,4 and 5 years for the company they get a gift. We do quizzes via an app when they win they get a gift.*

Do you think it is important to have such programs? Why?

- *Your employees are your brand ambassadors*

Thank you!