

# CITY MARKETING IN KREFELD



Bachelor's thesis

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ABSTRACT

Nowadays, most of the tasks people do within a day are related to technology and digitalization. Although there are many downsides to the digitized world people are living in, it has brought easiness and comfort to the point that life cannot be imagined without it anymore.

The purpose of this research is to find and provide the necessary information about the future smart cities, where digital services will be an inseparable part of people's lives. Specifically for the city of Krefeld, Germany, the research has been conducted to find out whether a City App is a solution or not, and how to update the existing City App in order to attract visitors as well as residents to use it. "The Study of the City of Brunswick" has been used as a benchmark for this research, where several ideas are presented and analysed, which have helped this research and its recommendations.

This thesis consists of four parts. To begin, the author introduces the topic as well as digital services and the city of Krefeld, continued by the theoretical background of Marketing and City Marketing, Marketing Mix and City Marketing Mix, followed by the existing knowledge about the Krefeld City App and the future smart cities. The third chapter consists of the analysis of the data of the survey, which is thoroughly analysed. Finally, the conclusion and recommendations are given.

**Keywords** City marketing, smart city, benchmarking, data analysis

**Pages** 43 pages including appendices 49 pages

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Appendix 1 Survey Questions

## 1 INTRODUCTION

Since the introduction of smartphones over two decades ago (Tweedie, 2015), they have undoubtedly become an inseparable part of our lives. Through apps and various websites people can explore and learn about anything that is of their interest, including places they have never visited and their characteristics. It is now easy to travel for fun, business, or even to meet friends and family who live across the continent.

Every traveling adventure comes with a lot of responsibility, meaning that people want to make sure they book something that is convenient for them based on location, price, and size of the room or apartment, as well as public transportation routes and prices, restaurants, grocery stores, etc. As of now, all this information can be found through websites (and apps) such as Google, Booking.com, AirBnb, etc., both before and after arriving to the city they're visiting.

However, people are not always visiting popular and big cities. Usually, depending on how popular a city is, there is more information about it online. Therefore, the smaller and less popular a city is, the more unlikely it is to find a lot of information about it.

A City App is an app which contains information about a specific city. Such apps can be made for one particular city and contain information only about that city, or they can be made for more cities, therefore contain information about multiple cities. (Herd, 2017)

The purpose of this bachelor's thesis is to determine whether a City App is a solution for people while they're visiting other cities or countries. Ideally, a City App would include real-time updates about the number of free rooms in hotels, hostels, and apartments in the city, public transportation routes and prices, grocery store opening hours, etc., in order to attract people who are travelling to use it. Besides these features, a City App ideally would have an outstanding layout and would be very easy to use. Considering all of the varieties that exist nowadays on the internet regarding these apps, something that is truly unique and has all the features people are looking for could definitely be seen as an advantage. Furthermore, such an app should be easy to use because of its audience. It should be considered that not only young people will be using this app, but the older people who might not be comfortable with trusting technology yet, as well.

Specifically, this research will be focused on determining the factors which increase the quality of stay in Krefeld, Germany, based on the benchmarking from Brunswick, also a city in Germany.

## 1.1 Digital services

Services which cannot be sold or delivered physically are digital services. Instead, these services are based online, and are delivered electronically. (Taxamo, n.d.)

It involves minimal human intervention since supply is essentially automated. Digital services are impossible to establish if there is no information technology. Digital services include, but are not limited to:

- Software and software updates
- Websites, hosting, content and VoIP
- Distance teaching
- Digital services and subscriptions
- Games, gambling games, and e-books
- Access to e-markets

(Taxamo, n.d.)

## 1.2 Krefeld

Krefeld is a city located in the state of North-Rhine Westphalia in western Germany. The city centre of Krefeld is located 10 kilometres west of the Rhine River (Britannica; Krefeld, n.d.).

Regarding the city's history, there is the district of Uerdingen, a small medieval town called Linn, as well as Bockum which is rich in country houses and villas, and Fischeln and Hüls, church villages. (Krefeld; History, n.d.)

It is also known as the city of "Velvet and Silk", with an architectural substance from the silk barons area, and a very rich history. The number of attractions in Krefeld offers something for everyone, including parks and green spaces, architecture, theatres, museums, etc. A few of the most attractive attractions in Krefeld are the Botanischer Garten (botanical garden), Deutsches Textilmuseum (German textile museum), Zoo Krefeld, etc. (Krefeld; Attractions, n.d.)

Krefeld can be discovered both by bike or on foot, and there are various guided tours offered for visitors (Krefeld; Guided city tours, excursions, and leisure, n.d.) . Visitors can also have an amazing shopping experience, as there is a large number of stores in the city centre. (Krefeld; Shopping in Krefeld, n.d.)

## 1.3 Aim for thesis

This bachelor's thesis is a requirement in order to graduate from the Double Degree Program between Häme University of Applied Sciences in Finland, and Niederrhein University of Applied Sciences in Germany.

The profound aim for this research is determining the factors which increase the quality of stay in Krefeld, Germany, as well as benchmarking to other cities, including the Study of the city of Brunswick, and the thorough analysis of the survey conducted to find more information about people's preferences regarding City Apps. Furthermore, the thesis aims to answer the research question and determine the objectives of this research.

#### 1.4 Research question

The author aims to answer the research question "What will the city of tomorrow look like especially regarding digital services?"

As digital devices have become an inseparable part of most people's lives, it is often difficult to determine the extent to which it is quite disturbing.

Mass surveillance, which is one of the components of digitalized cities, regardless of how uncomfortable it makes random citizens, is present among those of us who especially live in bigger cities. As much as it is considered to be opposing human rights, it is estimated that in the future it will become an inseparable part of our lives. (White, 2018)

The answer to this research question will potentially give an insight to what the future might hold for digital services in cities, and more specifically, what a City App should include to make people's traveling experiences as pleasant as possible.

#### 1.5 Research objectives

The objectives for this research are to determine the factors which might potentially increase the quality of stay for visitors in Krefeld. Furthermore, there will be an analysis given about digital services in cities and how they will shape the future. Information and resources were limited for this research; however, a thorough analysis of the theoretical framework and the data will be presented to the reader. The outcome of this research will be thoroughly analysed and discussed in the form of recommendations, which is the last chapter of this thesis. The objectives of this research are the following:

**The 1<sup>st</sup> objective:** To describe and analyse the city marketing theory

**The 2<sup>nd</sup> objective:** An analysis of the benchmarking with the City of Brunswick

**The 3<sup>rd</sup> objective:** To analyse the outcome of the research, present and analyse the answers collected by a conducted survey

**The 4<sup>th</sup> objective:** Give a conclusion and recommendations based on the research

## 1.6 Research methodology

A multi-method approach was used in this research, which consist of both primary and secondary data. The dominating method used in this research was the survey, which provided insightful information.

The most important part of this research was the survey, which was sent out to the participants through Facebook. The answers were thoroughly analysed and incorporated in the thesis.

Secondary data has provided useful information for this research, and it consists of literature review from newspaper articles, books, journals, as well as the use of internet for documents.

## 1.7 Thesis structure

This thesis consists on 4 chapters, each of which have a different focus. The introductory part focuses on establishing the topic and the layout of the thesis, including the research question and objectives which this thesis aims to answer. The second chapter consists of existing knowledge and literature review, which includes:

- Marketing literature
- City marketing literature
- Marketing mix
- City marketing mix
- The city's image
- City of the future

The analysis of the data is done in chapter three, which includes the survey results, their observation and summary.

Chapter four concludes the study, including recommendations and suggestions regarding City Apps.

## 2 EXISTING KNOWLEDGE

This part of the thesis focuses on theoretical framework. Due to limited resources available regarding the theory of City Marketing, in this part of the thesis the author has used Marketing including Marketing Mix in order to put emphasize the similarities and differences between the two.

## 2.1 Marketing

Marketing is a process through which firms create value for their chosen customers. Meeting customer needs is how value is created. Therefore, firms should define themselves by the customer benefit they provide, and not the products they sell. (Silk, What is marketing?, 2006)

More than any other business function, marketing deals with customers, who are an essential component of any marketing system. (Kotler, Armstrong, Wong, & Saunders, Principles of Marketing, 2008)

The creation of customer value and satisfaction is of high importance to the modern way of thinking and practicing marketing. Marketing's goal is attracting new customers by promising superior value, and also keeping and growing current customers by delivering satisfaction to them. (Kotler, Armstrong, Wong, & Saunders, Principles of Marketing, 2008)

It is a wide misconception that only large companies which operate in developed economies use marketing, when the reality is that marketing is critical in order for every organization to be successful. Marketing is seen in large profit-making firms just as well as non-profit organizations, like schools, hospitals, museums. (Kotler, Armstrong, Wong, & Saunders, Principles of Marketing, 2008)

As marketing can often be mistaken for it to be only advertising and selling, as important as they are, satisfying customer needs is more important in modern marketing. (Kotler, Armstrong, Wong, & Saunders, Principles of Marketing, 2008)

Marketing starts long before companies have a product. It is a way of measuring and determining whether a profitable opportunity exists for a company. It then continues throughout the product's life, by trying to find new customers as well as keeping current customers by trying to improve the performance and appeal of the product. (Kotler, Armstrong, Wong, & Saunders, Principles of Marketing, 2008)

Products will sell easily if the marketer understands consumer needs, followed by developing products and services that provide a superior customer value, and promotes and distributes them effectively. According to Peter Drucker, "The aim of marketing is to make selling unnecessary". (Kotler, Armstrong, Wong, & Saunders, 2008)

## 2.2 City marketing

City marketing, an area which has been in practice since the 19<sup>th</sup> century (Ward, 1998), is a discipline with a great lack of academic research. It has been in use for centuries, helping develop as well as promote nations,

places, and cities (Kavaratzis M. , From city marketing to city branding, 2004).

Its origin stems from social media and non-profit marketing (Kotler & Zaltman, Broadening the concept of marketing, 1969). The city marketing field progressed from 'place selling' to understanding and using integrated marketing and branding techniques (Ashworth & Voogd, 1990). City marketing aims to turn a city into a brand in its customers mind, which encourages positive migration as well as business relocation and tourist flow. As people tend to pay attention to brands and trademarks, they are also willing to spend on them. (Molainen & Rainisto, 2009)

As a field that mixes between multiple disciplines, the nature of city marketing brought out confusion between academics and practitioners. The development of the concept created uncertainties towards how cities as brands could be designed and managed. (Kavaratzis M. , From city marketing to city branding, 2004)

What these concepts aim for is the increase of investment and tourism through the development of the community, by activating and reinforcing local identity as well as social forces. (Kavaratzis M. , From city marketing to city branding, 2004)

On a global scale, improving the competitive image of deprived places is the main concern of this field, which can help develop an empirical framework, thus making a compelling step towards theory making. (Niedomysl & Jonasson, Towards a theory of place marketing, 2012)

The reason city marketing does not present a clear understanding of the concept is because of its complex field, which gathers multiple academic disciplines such as urban planning, economic development, geography, tourism, etc. (Berglund & Olsson, 2010)

When talking about specific journals for publication, 'place marketing' can be interchangeable with/to 'urban marketing', 'place branding', 'territorial marketing', or 'city marketing'. (Skinner, 2008)

More often than not, city marketing is defined as a management process that has to do with the attempts of place differentiation for competitive advantage over other places. City branding, on the other hand, is defined as the symbolic embodiment of all information connected to a city in order to create association around it. (Lucarelli & Olof Berg, 2011)

Finally, place marketing is defined as the measures taken by actors appointed to govern or improve a place's competitive image with the aim of attracting capital from elsewhere. (Niedomysl & Jonasson, Towards a theory of place marketing, 2012)

The rise of the so-called "entrepreneurial city" made marketing accessible to city administrators, where the marketing of places, as one of the defining features of the entrepreneurial modes of urban governance, has stood out since the 1970s. (Kavaratzis M. , From city marketing to city branding, 2004)

Through entrepreneurialism it is easier to capture the way cities are being run in a business-like way. (Hubbart & Hall, 1998)

More recent developments in the marketing field make the distance from traditional and general marketing to place and city marketing shorter, as well as the transfer of marketing knowledge easier and more efficient. Most publications on city marketing are limited to some aspects of marketing, whereas in most cases, there is a weak relation between modern development and marketing theory. (Bochert, 1994)

The concept of corporate branding and corporate-level marketing is a concept that has emerged in recent years and has a direct and clear relevance to marketing implementation in cities, which in earlier concepts of corporate image and corporate identity was a theoretical and practical development. (Balmer & Greyser, *Managing the multiple identities of the corporation*, 2002)

Due to the changing environment in which European cities operate, the applicability of marketing theory in urban governance and administration is of great interest. According to Ashworth (Ashworth G. J., *Marketing of places*, 1994), "place marketing is a legitimate form of marketing in the sense that the terminology, techniques and philosophies of marketing can be applied to places but equally, if it is to be attempted successfully, then a special type of marketing has to be devised."

A basic element of this new type of marketing, city marketing, is the decision that the major action areas have made, which is implementing a strategic marketing plan. The point of this is the creation of components that need to be orchestrated and managed, which potentially may provide a basis where a particular area is operationalized. (Balmer, *Of identities lost and found*, 2002)

Amongst many difficulties that city marketers face is the multitude of target audiences and groups of stakeholders. The targeted audiences can be the city's own residents, visitors, investors, etc., and for different forms of development, such as cultural, economic, social, etc., different audiences are targeted. (Kavaratzis M. , *From city marketing to city branding*, 2004)

### 2.3 Marketing mix

The marketing mix is used to describe the set of activities which comprise a firm's marketing program. Through this mix, firms blend elements into different programs, furthermore, when competing in a given product, firms can have various mixes at work. (Silk, *What is marketing?* , 2006)

The twelve mix elements are:

1. Merchandising/product planning
2. Pricing
3. Branding
4. Channels of distribution
5. Personal selling
6. Advertising
7. Promotions
8. Packaging
9. Display
10. Servicing
11. Physical handling
12. Market research

A regrouping of the aforementioned elements has become popular over time, which has created the 4Ps of marketing. The 4Ps of marketing are:

- Product
- Price
- Promotion
- Place

Source: (Silk, What is marketing?, 2006)

### 2.3.1 Product

A product is the total package of benefits which the customer can obtain. Thus, it does not necessarily only mean the product itself, but the product offering as well. A certain product always has to be considered from the point of view of the value that is delivered to the customer, such as:

- The physical product
- Company reputation
- Name of the brand
- Financing plans
- Convenient availability

Source: (Silk, What is marketing?, 2006)

### 2.3.2 Place: Marketing channels

Marketing channels are also known as a set of mechanisms (or network) which firms use to go to market. The eight generic channel functions, as identified by V. Kasturi Rangan from Harvard Business School, serve as a starting point of assessing needs in a particular context, such as:

1. Product information
2. Product customization
3. Product quality assurance
4. Lot size
5. Product assortment
6. Availability
7. After-sale service
8. Logistics

Source: (Silk, What is marketing?, 2006)

### 2.3.3 Promotion: Marketing communication

This element is about making a decision about the appropriate way (or set of ways) through which to communicate to customers, raise awareness of your product, as well as knowledge about the product's features. The model called the *Ms* model is useful when the tasks are in planning communications strategy. This model consists of:

1. **Market:** To whom is the communication addressed?
2. **Mission:** What is the objective of this communication?
3. **Message:** What specific points should be communicated?
4. **Media:** What vehicles will be used to convey the message?
5. **Money:** How much money will be spent in the effort?
6. **Measurement:** How will impact be assessed after the campaign?

Source: (Silk, What is marketing?, 2006)

### 2.3.4 Price

A price is what determines the value of a firm's product to the customer, as a combination of product, place, and promotion. This value represents the absolute maximum price that the customer is willing to pay for said product. (Silk, What is marketing?, 2006)

## 2.4 City marketing mix

The marketing mix has been acknowledged as an essential step in the whole marketing effort as well as highlighted in city marketing literature. (Kotler, Asplund, Rein, & Heider, Marketing places Europe, 1999)

There have been many attempts to create a mix of elements similar or equivalent to the 4Ps, however, what this mix should include in the "city marketing" context has presented several difficulties associated with the distinctiveness of places and cities as well as the relevance of the traditional marketing mix to city marketing. (Kavaratzis M. , From city marketing to city branding, 2004)

According to Kotler, suggested that even with adopting the marketing mix as suggested by general marketing, there should be a distinction between four strategies for place improvement, such as:

- **Design:** place as a character
- **Infrastructure:** place as a fixed environment
- **Basic services:** place as a service provider
- **Attractions:** places as entertainment and recreation.

(Kotler P. , Marketing places Europe, 1999)

## 2.5 The city's image

Image formulation and image communication have a crucial role when it comes to the city marketing mix. The importance applied to the image is in some cases expressed as a focus on the promotion process (Burgess, 1982), whereas in other cases it is expressed as a focus on the conventional promotional measures (Kotler, Asplund, Rein, & Heider, Marketing Places Europe, 1999)

The significance of the image of a city is often articulated as an emphasis that a city's image is not only communicated by promotion, but the rest of the marketing measures as well. (Ashworth & Voogd, The meaning of the city, 2002)

The communicative effect of all of the marketing measures has origins in the repeated emphasis on the need to connect and put together the sets of marketing measures, which is seen in both general marketing as well as city marketing literature. Furthermore, this communicative effect comes from realizing that the encounters with the city come from perceptions and images, thus, the object of city marketing is not the city itself, rather than its image. (Kavaratzis M. , 2004)

## 2.6 City of the future

Most of the people in the world live in cities – which is expected to rise to 70% by 2050. The results of urbanization have been very impressive, as cities are accountable for 80% of global GDP. Every success comes at a cost, and the success of cities is no different. What affects modern cities nowadays in a negative way is unsustainable consumption patterns as well as environmental degradation, however, instead of deurbanization, the next decades will take the lead towards solving global problems. (Puutio, World Economic Forum; Here are 5 predictions for the future of our cities, 2018)

As comfortable as digitization has made life for us, in the future, it will be even better. For example, in smart cities like Tallinn, citizens can engage with the government easily and effortlessly through digital platforms, thus enabling them to sign contracts, vote in elections, and file their taxes. Similarly, Singapore and Amsterdam are working towards the same plan. E-governance is perhaps the most underappreciated promise of digitization – furthermore, the time where governments see citizens as customers rather than citizens is closer to us than we think. (Puutio, World Economic Forum; Here are 5 predictions for the future of our cities, 2018)

As uncomfortable as surveillance cameras and sensors might make citizens, they are an inseparable part of our future. All sensors, such as cameras, wireless systems, or acoustic networks will communicate all information about the infrastructure, health, and status of the city. The sufficient energy to power these smart cities will be generated from renewable and clean sources, such as solar, wind, geothermal, and hydroelectric power. The density of future smart cities will surely lead to an upgrade of the cities in order to fit all the citizens. (Jaquith, 2017)

Undoubtedly, the city of the future is a highly interconnected smart environment of a symbiosis between people, businesses, the government and the Internet of Things (IoT), Artificial Intelligence (AI), big data, robots, drones, green vehicles, 3D and 4D printing, as well as renewable energy. (City Metric; What will the city of the future look like?, 2017)

Ultimately, smart cities are made to capture enormous amounts of data regarding the population and its patterns. When gathered, this is called big data, which is essentially gathered by surveillance. (City Metric; What will the city of the future look like?, 2017)

The IoT essentially means that potentially everything and everyone will become a data collection device. Therefore, after the data, the IoT will become the second driving force that is behind the rise of smart infrastructure, which will enable everything from air conditioning to parking meters to function in a smart city, where microphones, voice recognition, sensors etc. must be connected to the IoT. (City Metric; What will the city of the future look like?, 2017)

Smart infrastructure will be an inevitable part of future smart cities. The three most important new technologies, big data, the IoT, and renewable energy are working together to transform the daily life. An example of this is South Korea, which is planning an entire network of smart roads by the year 2020, which will include charging stations for electric vehicles as well as infrastructure which handles autonomous vehicles. (City Metric; What will the city of the future look like?, 2017)

This data and awareness has a deep emphasis on sustainability, which will enable the decisions that are made to have the best possible use of space,

water, energy, fuel, electricity, and all resources. One of the priorities is the anticipation of traffic jams, which will lead to providing alternate routes to save fuel, time, by also reducing the impact on the infrastructure of the city itself. Another priority is the limitation of waste, a logical outcome and a benefit that comes from the merging of big data, the IoT, and Artificial Intelligence, which undoubtedly is part of a rise of smart infrastructure. (City Metric; What will the city of the future look like?, 2017)

Furthermore, there is a new scientific tool which predicts solar weather, which will therefore make the rise of solar on smart roads and homes more attainable. (City Metric; What will the city of the future look like?, 2017)

As of now, the smart city movement has the power and potential to transform the organization of people and physical objects in a way that surpasses urban development. This shift to smart infrastructure is not only aspirational, in many ways it appears to be a critical way to enable the sustainability of the future cities. (City Metric; What will the city of the future look like?, 2017)

## 2.7 Krefeld City App

The already existing app for Krefeld is called “Krefeld App” and has been launched around 5 years ago, according to the Apple Store. Due to the limitation of resources regarding this particular part of the thesis, only the information that could be retrieved in English will be presented. (Apple Store, 2017)

A characteristic that cannot be ignored is that there are no available ratings about the app on the Apple Store, which is usually the case when the app has not been downloaded enough times to attract users to write reviews. The Krefeld App can be found in the Apple Store, Playstore for Androids, as well as through this link: <http://krefeld.cityguide.de/>

The features of this app include, but are not limited to:

- Apotheken – (translation from German: Pharmacies)
- Auto & verkehr – (translation from German: Car & Traffic)
- Beauty and wellness
- Beauty app
- Behördenfinder – (translation from German: Authorities Finder)
- Bildung & Schulen – (translation from German: Education & Schools)
- Bürgerservice – (translation from German: Civil Service)
- Dienstleistungen – (translation from German: Services)
- Einkaufen – (Translation from German: Shops)
- Freizeitplaner – (translation from German: Spare time planner)

- Sport
- Hotels & Zimmer – (translation from German: Hotels & Rooms)

All of the existing features contain sub-branches which lead to other links that provide what the user intends to search for. A current flaw of this app, according to the author of this thesis, is that the app is only offered in German. As Krefeld may not internationally be known as widely as other larger German cities such as Cologne, Berlin, or Hamburg, it is still of high importance that the app is offered in the English language, too. Not all visitors speak German, and it is a hassle when most of the information can only be found in German. In Krefeld, there are also a lot of students who study only in English and come from different countries around the world, which further emphasizes how important it is for this app to also be offered in English. In the 4<sup>th</sup> chapter of this thesis, the data about the current flaws of the existing app will be discussed, as well as recommendations will be given in order to help make this app as user-friendly as possible in the future. (Krefeld Am Rhein, 2017)

## 2.8 Benchmarking

### 2.8.1 Literature review

Benchmarking is a continuous and systematic process of comparing products, processes, services, and outcomes with other organizations or companies, in order to improve outcomes through identifying, implementing, and adapting the best approaches. (Edith Cowan University, 2011)

It provides a very formal exchange of information, which within a structure and timeline focuses on learning. (Wilson & Pitman, 2000)

Benchmarking is a performance improving tool, through which an evidence-based process which includes comparisons is implemented. (Learning & Teaching unit, 2018)

### 2.8.2 Principles of benchmarking

According to the benchmarking theory, there are ten principles:

1. Improves practices, services or products;
2. Involves learning about “best practices” from others;
3. Accelerates the rate of progress and improvements;
4. Contributes to continuous quality management;
5. Is an ongoing process;
6. Promotes fresh and innovative thinking about problems;
7. Provides hard data on performance;
8. Focuses not only on what is achieved, but on how it’s achieved;
9. Involves the adaptation, not merely adoption, of best practices;

10. Results in the setting of specific targets.  
(Meade, A guide to benchmarking, 1998)

### 2.8.3 Types of benchmarking

The very many different types of benchmarking have many ways of categorizing. As the types are used by different authors who give them different meanings, each type is useful for a particular situation. (Epper, 1999)

According to (Stella & Woodhouse, 2007) there's three types of benchmarking:

1. Sector benchmarking
2. Generic benchmarking
3. Best practice benchmarking

There's also two types of standards-based benchmarking (McKinnon, Walker, & Davis, 2000):

1. Criterion reference benchmarking
2. Quantitative benchmarking

Based on the kind of organization serving as the benchmarking partner, there are four types of benchmarking (Meade, A guideline to benchmarking, 1998):

1. Internal benchmarking
2. Competitive benchmarking
3. Industry benchmarking
4. Generic benchmarking

However, the most commonly used model of benchmarking is based on the practices or processes being benchmarked (Meade, A guideline to benchmarking, 1998):

1. Process benchmarking
2. Performance benchmarking
3. Strategic benchmarking

## 2.9 Study of the city of Brunswick

Located in Lower Saxony, Brunswick is a city which embodies the legacy of the Royal House of Hanover very uniquely. (Germany Travel: The Lion City of Brunswick, n.d.)

Brunswick is one of the most dynamic cities in Germany. Regarding its economic power, Brunswick stands stronger than the neighboring region, Hanover.

This study is conducted by the University of Bonn, which will be used as a benchmark for this thesis.

Brunswick is a research-intensive region in Germany, containing many research facilities, research related companies as well as institutions, with high competencies in Information and Communication Technologies.

The proportion of employees in the technology sector is 22%, which is clearly above the national average. Brunswick is an innovative city, that is always thinking about the future. (Cima Beratung + Management GmbH, 2017)

### 2.9.1 “Smart City Brunswick”

The project named “Smart City Brunswick” is a key project for the future vision of the city. It was formulated by the citizens and approved by the city council. The existing initiatives to build a smart city will be further developed. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

Furthermore, there are areas which can be further developed in the “Smart City Brunswick” project, such as:

- Mobility
- Energy
- The Environment
- Infrastructure
- Promotion of Innovation
- Healthcare
- Open data

(CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

### 2.9.2 Open data

As an example of the development of Open data, the project suggests that public data shall not only belong to the administration, but to the city, and more specifically, the citizens. The information on services and such will be updated by the citizens digitally. The basic requirement would be the collection of the data and information, the analysis of the data, as well as digital quality. The city of Brunswick is currently publishing an overview of

maps in the area. The city has formulated a long-term goal for itself, its potential and need for action regarding Open data. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

### 2.9.3 A digital city center and the irreversible change in commerce

It has been roughly 25 years since the digital world has been introduced to us, and ever since, it has become part of different areas of life and business. Furthermore, it has impacted inner cities as well as trade. Retail trade, like never before in history, had to deal with enormous changes in a very short time, which still continues to happen in the present time. Classic trade has merged with technology, making purchasing easier for everyone, everywhere. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

### 2.9.4 Online trading

Retail sales in Germany alone have increased by 14% since 2010. Simultaneously, there has been a tremendous increase in online trading. Online trading and purchasing, to customers, has become a distinctive action from 'traditional' purchasing. Consequently, in today's world, convenience is one of the most important factors to customers when it comes to shopping, regardless if they shop online or in stores. Therefore, online shopping offers more convenience to customers because everyone can download the app and have it on their smartphones and access it whenever and wherever.

Whatever the reason for visiting a city center—be it shopping or recreation, visitors will always visit the city center of whichever city they are visiting. Usually they do some research about what to see and where to go according to their preferences. This research is mostly done through search engines, portals, social media, etc. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

### 2.9.5 Stores located in the city

Stores present a major competitive advantage to online commerce since customers have the chance to see the goods presented to them, which makes it easier to judge whether they want to purchase a good or not. However, in a survey conducted by IFH Cologne in 2014, 20% of the respondents stated that they were less likely to visit the city center when it comes to shopping, because they purchase everything they need online. Regardless of size, all cities are affected.

This has presented an advantage to other sectors, such as restaurants, bars, and cafes. Visitors are always attracted by places they can spend time in with their loved ones, share a meal or a drink, and have a nice conversation. However, shopping remains the main reason why visitors are attracted to see the city center. In the study it is mentioned that shopping centers located outside of the city or far from the city center should not be aimed for visitors, because while people might be interested in shopping, they prefer to do it in the city center where they can simultaneously see interesting buildings, museums, etc. (CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

### 2.9.6 Local online platforms

Online platforms, such as websites and apps, offer store locations as well as real-time information about the products available in said stores. This has enabled a balance between online and store shopping, since people can check the app out, and if there is a product that is of their interest, they can visit the store and make a purchase.

Such platforms are highlighted in the Study of the city of Brunswick, with the goal to emphasize the importance of physical stores, while simultaneously promoting digital services of those stores.

Here are some ideas for online platform formats:

- **Online city portal** – A shopping guide with a list of industries as well as contact information
- **Online shop window** – A comprehensive presentation of stores and what's in them without the possibility to purchase online. The customers will get the feeling that they are in the virtual store, however, they need to visit the physical store to make a purchase
- **Online marketplace** – A more sophisticated form of the original marketplace, where people can buy and sell goods online. It should include the distribution of goods. Besides offering marketing and promotion of goods, it should be user-friendly and easy to figure out and use.

(CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

### 2.9.7 The city center of Brunswick

The city center of Brunswick is very attractive to visitors – education, culture, trade, as well as leisure activities are what add value to the attractiveness. According to a survey, 84% of Brunswick citizens are satisfied with the number of shops in the city, whereas the average satisfaction rate across all cities is 79%.

91% of the respondents are “very” satisfied with the presence of retail stores.

When it comes to markets, squares, and pedestrian zones are highly appreciated in Brunswick. 86% of the respondents to this survey answered positively when asked. Cultural facilities, such as theaters, libraries, as well as museums are an inseparable part of the citizens’ lives. An interesting fact mentioned in this study is that 66% of the people stated that the only reason to visit the city center is shopping. 80% stated that they never visited the city center for any other reason except shopping. (CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

### 2.9.8 Digital presence in the city

A simplified meaning of digital presence would be occupying space on the Internet. Approximately 10 years ago, being occupying space on the Internet meant having a website. Today, besides being able to advertise your products, it is easier to boost communication through websites or even pages in social media.

This digital presence has made customers expect real-time interaction with representatives from companies. Therefore, in this day and age, it is not enough to only advertise your products on the website. The customer must feel like they can connect with the company anytime. Of course, the more social platforms a company uses to advertise their products, the more “present” they are digitally.

The digital presence of cities is more complex. Social media is relevant, however, external factors such as political and administrative issues have a more important role when it comes to cities. In this study, it is mentioned in multiple occasions that the importance of increasing the digital presence of cities is incredibly important. (CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

### 2.9.9 Virtual “face” of the city center

The city center of Brunswick shows a very friendly face. There are many small and big buildings and blocks of architecture, different experiences, a lot of diversity, a lot of people, etc., which contribute to this friendly face of the city.

However, when it comes to the online or virtual face of the city, there is quite a bit of a difference between what we see in real life and how things are perceived in the virtual world. Even though a lot of attention as well as

hard work can be dedicated to making city centers look attractive, it is very hard to put “friendly faces” to cities while trying to do marketing.

Brunswick is now the first city to be making online monitoring for a spatial area, which is the city center. To find out the reputation the Inner City of Brunswick has on the internet, the monitoring tool Ubermetrics Delta searched for posts in the publicly visible web, after which the data was filtered and rated. This tool extracted data from more than 400 million online sources, such as: Blogs, News, Forums, Journals, Social Networks, etc.

When the term Brunswick is searched in Google, there are over 36 million entries available. However, when the words “Brunswick city center” are entered, there are only over 1 million results. Therefore, if someone wants to search for information related to the city center without typing down the words “Brunswick city center”, they would get rather irrelevant information regarding their search, as there is a lot of information about the city but not the city center itself.

So, to give a virtual face to the city center of Brunswick, the results of the summarized and evaluated online monitoring are sorted within these topics:

- Culture/Leisure/Events
- Cityscape/Architecture/Public space
- Quality of stay/Attractiveness
- Retail/Shopping/Purchasing
- Business/Service
- Traffic/Accessibility
- Digital technology/Tools

(CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

#### 2.9.10 Culture/Leisure/Events

The most frequently mentioned or figuratively documented topics revolved around the topic of culture, leisure, and events. Particularly, for example, the visit paid to a special or evening event in the city center by visitors more often than not results in posting an image on a variety of platforms, such as Instagram, Facebook, etc., where the “real-time” picture is communicated publicly. This enables friends to sympathize with the image, which often leads to interest shown in the event, location, etc. Journalists and bloggers have a very high influence when it comes to this particular topic, since they reach out to all of their followers with information about the location of events, prices, as well as other useful

information about the event, while at the same time they're promoting or trying to sell and market the event.

Another aspect of this topic is gastronomy. Especially recently, it has become a "trend" to post pictures of food, restaurants, interiors, etc. while dining. This undoubtedly helps restaurants and the city center with publicity, because the impressions of those pictures that reach a lot of people often result in them visiting the said restaurant.

Finally, in this study, the importance of hashtags is mentioned. In social media, where the hashtag #Braunschweig (in English – Brunswick) is used, it is mostly used in a positive manner, where it gives the city a positive impression to people searching and seeing posts where this hashtag is used. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

#### 2.9.11 Cityscape/Architecture/Public space

Social media is largely present in this topic, too. Pictures with locations can be found almost exclusively, featuring particular sights of the city, buildings which represent a unique architecture, and which show the real cityscape of Brunswick. Therefore, the "online" face of the city regarding architecture and cityscape is the literal face of the city, which is the same in pictures as it is in real life. The main attractions used for this are the cathedral, the Rizzi house, or the Magniviertel. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

#### 2.9.12 Retail/Shopping/Leisure

Considering the fact that the city center of Brunswick is characterized with a significant amount of trade, the expectations at first were, of course, that this topic might be widely present. However, the numbers of the result of the research were much less than expected. (CIMA Beratung + Management GmbH, Digitale Präzens Innenstadt Braunschweig, 2017)

#### 2.9.13 Quality of stay/Attractiveness

According to this study, results from this field especially were found on Instagram, which were followed by a wide use of hashtags. The typical posts, which surely help with marketing the city, were of Magniviertel (part of the city) and Bürgerpark (a park). People were posting about their "mood" and showing pictures of the beautiful sceneries. These so-called contributions made by people have proven to be positive most of the time, and if not especially positive, they have been neutral, but never negative,

which means that citizens are positively promoting the quality of stay and the attractiveness of the city. (CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

#### 2.9.14 Recommendations

The final part of the study focuses on recommendations, which will be featured in this thesis as well. However, due to the loss in translation, since the study is originally in German, some of the parts will be skipped as the translation is not clear enough to be featured. The recommendations include, but are not limited to:

- Basic online check

This part of the recommendations is about trade and service activities, and how related information should be found online *and* offline. For their online presence, the focus is on, but not limited to:

- Domain and e-mail address
- Contact information
- Data protection
- Company directory
- Calendar and appointments
- Responsive web design
- Social media channels

The focus should shift towards smartphones, and companies should make mobile-friendly websites in case they do not have apps. Online presence is a very important part of promoting the city, and to do so, it should first be available to citizens and visitors.

- Virtual location

When information is available online, it is easy for visitors of the city in general, but also visitors of parks, restaurants, cafes, shops, to put a location of where they are and thus, promoting said restaurant, café, or park. This can easily be done through social media channels, where users are enabled to specify their location if they wish to do so.

- Social Media

In today's world, smartphones are used by more than 70% of people who communicate through mobile phones, and it is classified as the most important, many times even the only source of information. Social media represents the lives of a large part of visitors as well as citizens, through which they can communicate and ultimately benefit different companies,

by promoting and advertising their interiors, menus, location, etc., through pictures they share with their friends.

When it comes to customer loyalty, communication through social media has its own big impact. When considering long-term plans, it is highly beneficial for stakeholders to engage their customers through various online channels, which ultimately enables them to sell through those channels, even if that is not their first intention.

Customers, as well as visitors, expect simple ways of contacting customer service. Customer service can promote itself by being interactive with its customers in real time, helping them solve problems and assisting them through purchases and different activities.

- Local WLAN

A modern mobile network is considered as the basis of a digital mobile infrastructure. Brunswick is supplied by the three major providers with the 4G/LTE network. Furthermore, there is a supply of free Wi-Fi in the center of Brunswick, where visitors can access the internet for free for a limited amount of time.

- Local online marketing

Online marketing is becoming an increasingly important task to be developed for the city center. It is very clear that individual companies have adapted their own marketing needs. When it comes to specialist retailers, it makes perfect sense for them to find their own way of online marketing within the scope of their own possibilities and their customers' wishes.

However, in Brunswick, the city center (or the inner city) should also be sold to the customers. That can be planned strategically, although at the moment there are no convincing strategies.

Trade companies and service providers can only be successful when they know how to engage with their customers through online activities. Different companies have different strategies, and the effort they make is also different. A credible approach of a fundamental online marketing strategy for trading in the city center would make more "dealers" or traders feel addressed, therefore more marketing to the customers.

Bloggers and real-time marketing are another strong point of this particular recommendation since visitors and customers can get real-time information about something of their interest regarding the city. Different activities can be promoted, thus enabling people to engage freely with said bloggers.

- Local online platform

The final part of the recommendations is the local online platform, which is available to cities which want to have it built. This platform is characterized by presenting and selling local stationary providers on the Internet, like an online marketplace. Residents as well as visitors should share the local information even when it's not related to commercial topics. This way, they can exchange goods through digitalization. (CIMA Beratung + Management GmbH, Digitale Präsenz Innenstadt Braunschweig, 2017)

### 3 DATA & FINDINGS

#### 3.1 Introduction

This part of the thesis focuses on data collected in order to make the research more accurate regarding City Apps and their usage. The research gathered from the existing app as well as the survey answers will be thoroughly analyzed in this chapter.

The data was collected from a survey shared on the 8<sup>th</sup> of May 2018, which accepted responses until 30<sup>th</sup> of May 2018. The survey was shared on Facebook, because the targeted people were the ones who prefer to travel whether it is for leisure, entertainment, or business. Every question in the survey had multiple choice answers, moreover, every question had the "other" option through which the participants could add preferences that were not included in the survey. The survey was conducted in the English language.

This survey includes 71 participants of unknown genders and ages, because the two factors were not relevant for the research. Instead, the comparing factor that was used in the research of this data is the frequency of the participants' travelling.

In total, there were 8 questions, the purpose of which was to find out which factors are most important for people when they visit other cities, as well as to find out whether a "City App" is a solution – or an option that people would like to have available when visiting another city.

The 1<sup>st</sup> and 2<sup>nd</sup> question of the survey were focused on the frequency of the participant's traveling as well as the important factors when visiting another city. The information aimed to be collected for this particular part of the analysis is important for determining the kind of behavior frequent travelers/semi-frequent travelers/non-frequent travelers have respectively when visiting other cities.

The 3<sup>rd</sup> and 4<sup>th</sup> question were focused on finding out the preferred kind of transportation the participants like to use, and the search engine/app they use to search for the routes, prices, and timetables. It is of immense importance to find out what way of transportation travelers prefer, in order to try to make the City App as usable as possible.

The 5<sup>th</sup> and 6<sup>th</sup> question were heavily focused on what apps or websites the participants use to search for accommodation and restaurants in the place they intend to visit. Therefore, benchmarking and creating ideas for making the City App successful is another important step of this analysis.

The last two questions were focused on City Apps, the most important factors the participants would want in a City App, and finally, whether they would prefer to use a City App or not. Presenting to the participants that if a City App would have all the requirements they need is a more direct way of finding out whether they would prefer to use it or not. Furthermore, finding out which requirements they want and need is a highly important step towards making recommendations for the City App.

### 3.2 Travelling frequency

This section will be the first one to be analyzed, as according to the author, the frequency of the participants' travelling is highly important when analyzing the other factors too. Charts will be presented for each part of the analysis, to make it more convenient for the reader to understand the highlighted points.

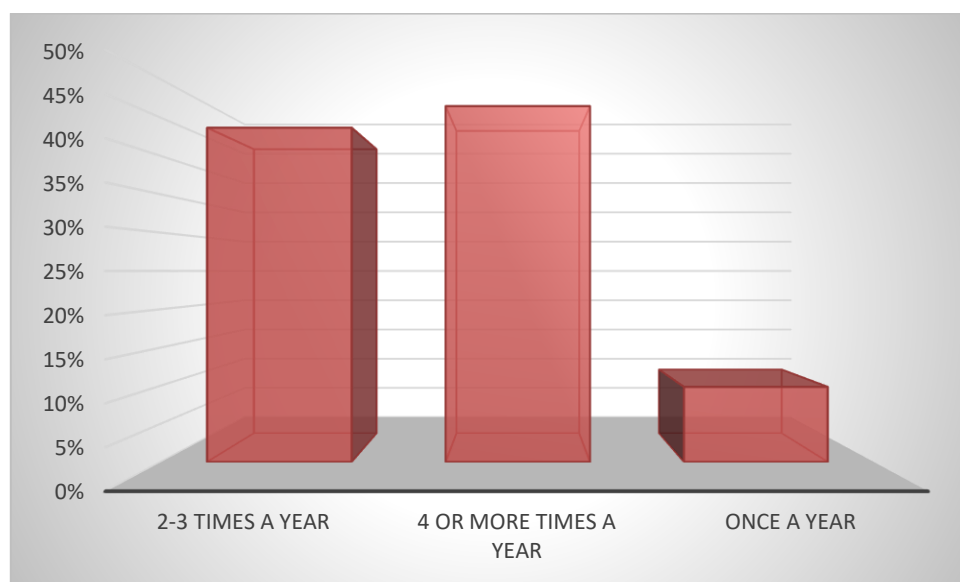


Figure 1: Travel Frequency

Figure 1 indicates the frequency of the participants' travelling, measured annually. A total of 46,48% of the travelers travel 4 or more times a year, which is a characteristic in this analysis because people who travel more

tend to have created their habits and know-how when it comes to traveling.

43,66% of the participants travel 2-3 times a year, whereas only 9,86% travel only once a year. The low percentage of people who travel only once a year will give this analysis an insight about the behavior and preferences these travelers have.

In this analysis, these three answers have been categorized as the following:

- Non-frequent travelers
- Semi-frequent travelers
- Frequent travelers

Non-frequent travelers are those who travel once a year, semi-frequent travelers are those who travel 2-3 times a year, and frequent travelers are the ones who travel 4 or more times a year.

7 of these participants are non-frequent travelers, whereas 31 are semi-frequent travelers. The majority of the participants, 33 of them, are frequent travelers.

It is of great importance to have such a variety of answers to this specific question. As it will be seen in the following sub-chapters, people who travel more often have different preferences and priorities to those who do not travel as often. Thus, this analysis will give results which can help target all travelers.

### **3.3 Important factors when visiting another city**

This part focuses on determining which factors, according to travelers, are most important when visiting another city. The survey participants had a choice of determining what is most important to them, as well as choosing many options at once. The options are as follows:

- Public transportation timetable & prices
- Parking
- Suitable restaurants (price range, food allergies, specific diets)
- Grocery stores (opening hours and locations)
- Other stores (clothing etc., opening hours and locations)

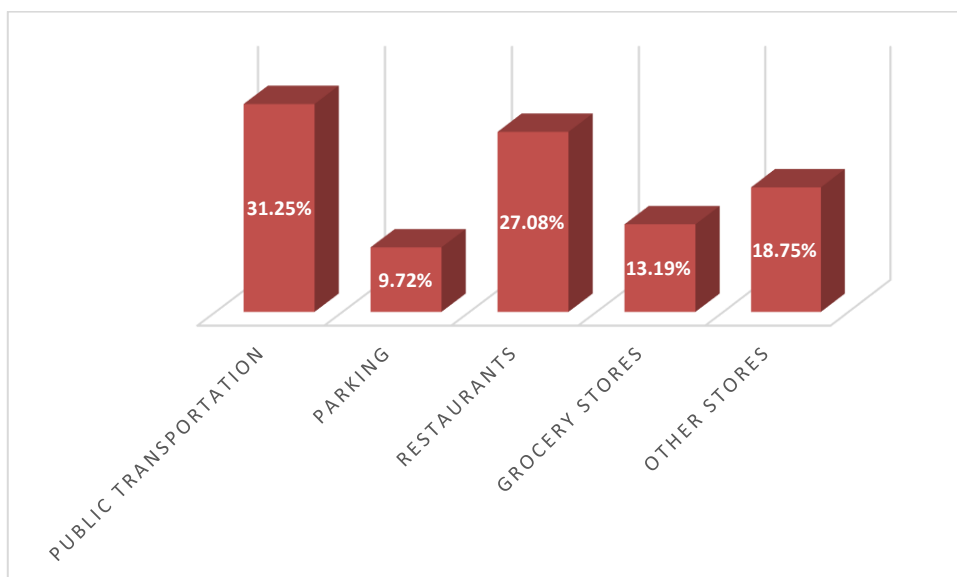


Figure 2: The most important factors when visiting another city

As seen on Figure 2, the most important factor is public transportation and information about timetable and prices, followed closely by restaurants.

Price range is a specificity about which a large amount of people, no matter the age or income level, wants to be informed about possibly before visiting a specific restaurant. People with food allergies as well as specific diets also need all the information they can get for a restaurant to be able to decide whether it is the suitable place for them or not.

Shopping, which is included in 'Other stores', has reached 18,75%, which indicates that people are also highly interested in shopping when traveling. Information about stores and their opening hours can undoubtedly be found on Google, however, if it is included in a City App where people could find all the relevant information, it would be attractive for them to use the City App.

Grocery stores and parking information is in the bottom of the list of important factors people need when traveling. However, grocery stores are of high importance to people who have specific diets, who are traveling with kids, or even for those who are staying in a city for a longer time and prefer fresh food. Parking information, on the other hand, is only relevant to people who are traveling by their own or rental cars.

### 3.4 Transportation preferences

In every traveling experience, transportation in the city you are visiting plays an important role, regardless if it is a holiday or a business trip. The options to this particular question consist of these options:

- Public transportation (trains, trams, buses)
- Uber

- Taxi
- Personal car
- Rental car

The following figures present a more thorough analysis to this question.

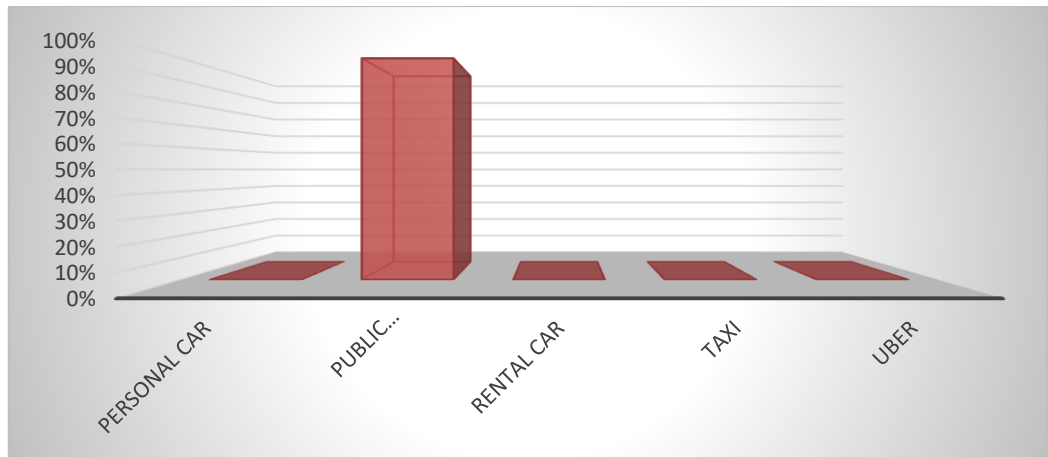


Figure 3: Non-frequent travellers' choice of transportation

All of the non-frequent travelers have chosen public transportation as their choice of transportation while they are traveling, as it is largely focused on prices and timetables. It is of great importance to make it easier for people to find information online and in advance about public transportation, because unpleasant experiences often lead to disappointment and hesitation towards using public transportation as well as traveling and exploring other cities.

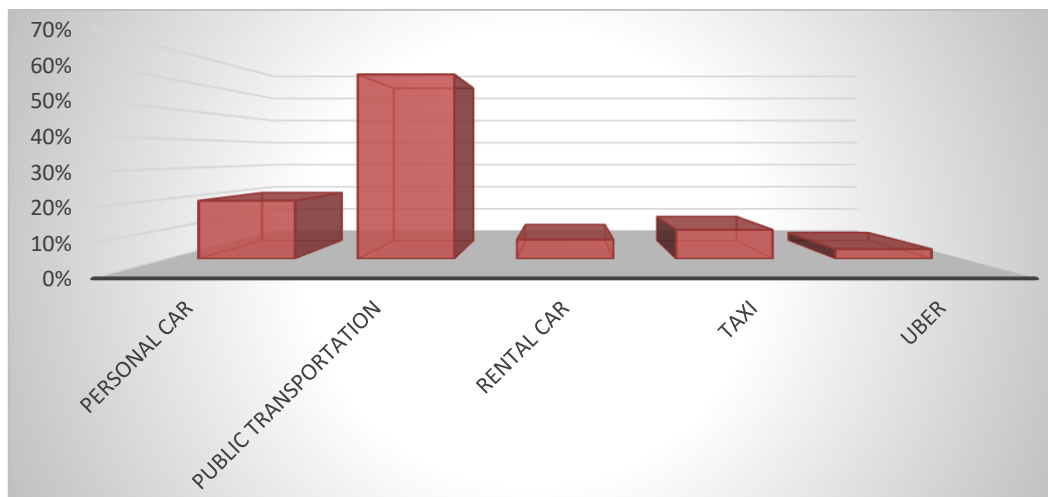


Figure 4: Semi-frequent travellers' choice of transportation

Semi-frequent travelers, however, proved to be more flexible when making their choices. 61,29% prefer to use public transportation, which continues to emphasize the importance of real-time information that can be found online.

19,35% prefer to use their personal car, which, of course, is the most convenient option. The rest prefer to use rental cars, taxis, and Uber. (This

should also be included in a City App to make the travelers' experience as pleasant as possible, where prices and locations would be included.)

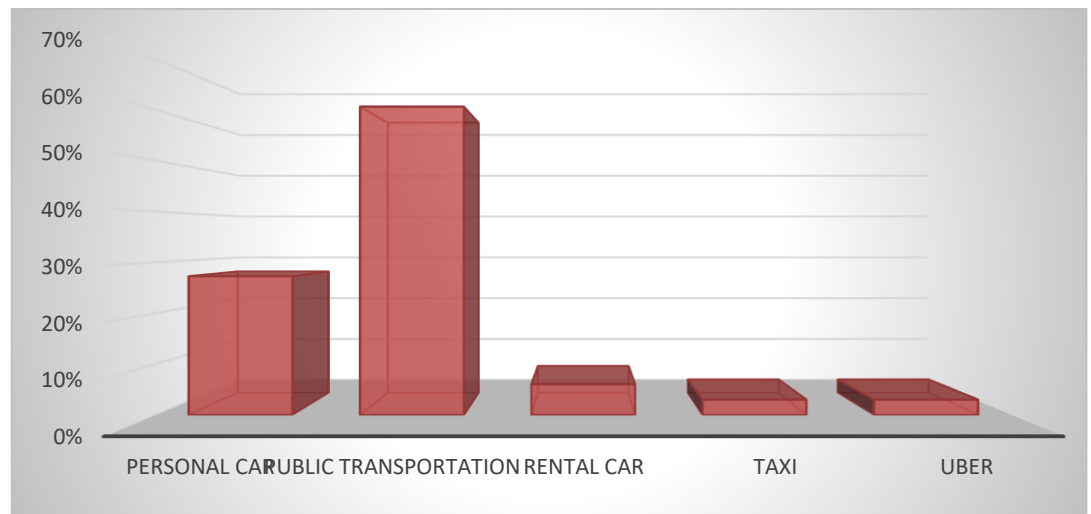


Figure 5: Frequent travellers' choice of transportation

Frequent travelers prefer personal cars as a choice of transportation in a higher percentage than the other two groups, reaching 27,27%. However, public transportation still remains a first choice for 60% of the frequent travelers.

#### 3.4.1 Search platform preferences

This question was only focused on those who chose 'Public transportation' as a way of transportation in the city they are visiting. They had to choose between searching for routes and prices through Google (including Google Maps) or a public transportation app, such as Deutsche Bahn in Germany for example.

In total, 60 out of 71 participants chose 'Public transportation'. Out of those, 7 were non-frequent travelers, 27 were semi-frequent travelers, and 26 were frequent travelers.

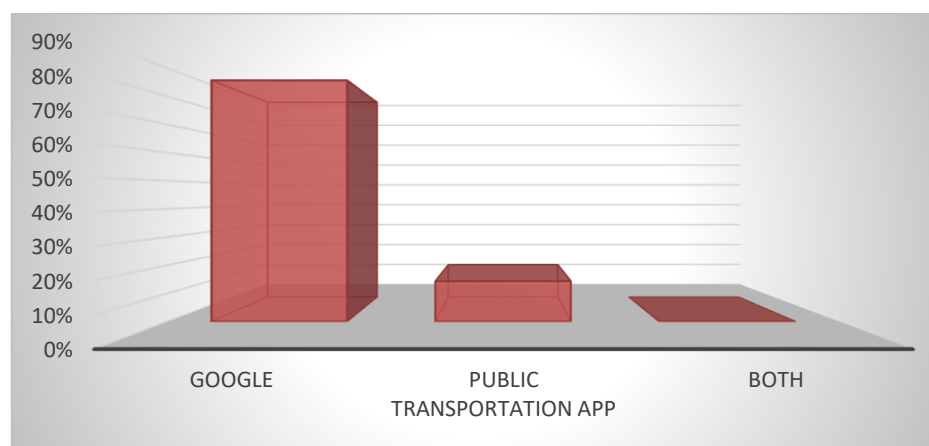


Figure 6: Non-frequent travellers' choice of search platform

85,71% of the answers in this category present Google as a first choice of searching for public transportation routes, prices, bus/tram stops, etc. 14,29% would or do prefer to use a public transportation app if it is available. However, that results to 1 in 7 people in this case.

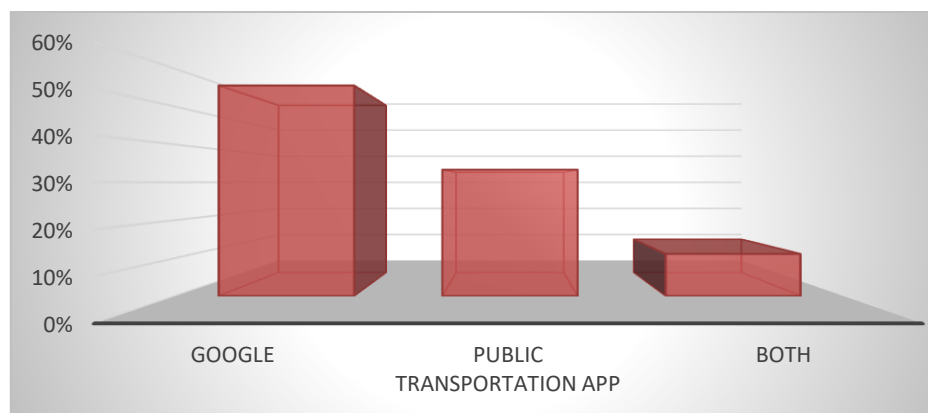


Figure 7: Semi-frequent travellers' choice of search platform

What distinguishes this figure from the previous one is that 11% of the participants chose both as a preference of search platform. Over 50% of the participants, 55,56% to be more exact, have chosen Google. The rest, 33,33% have chosen public transportation app.

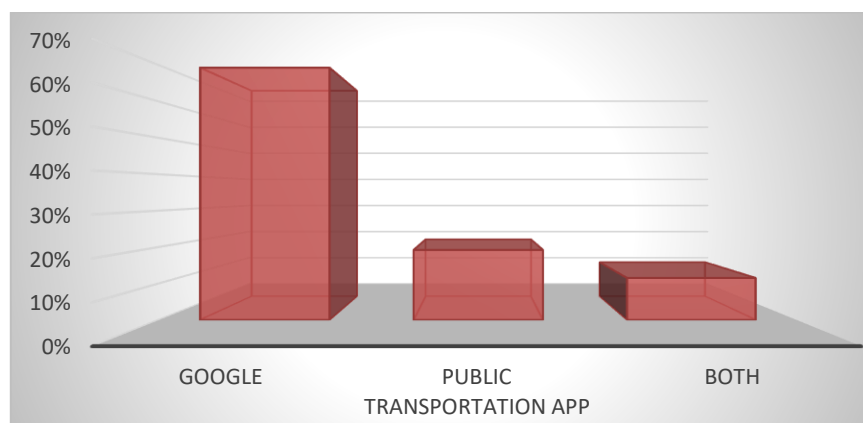


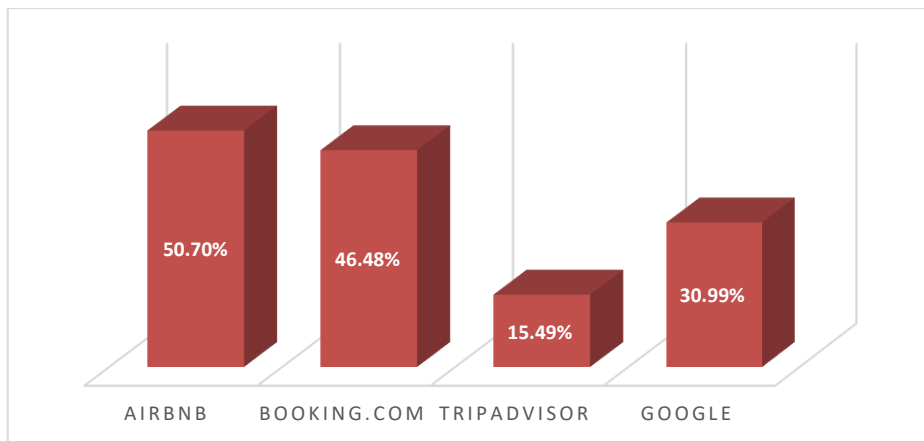
Figure 8: Frequent travellers' choice of search platform

69,23% of the frequent travelers have chosen Google as their favorite search platform. 19,23% prefer the public transportation app, whereas 11,54% prefer both of the options.

### 3.5 Accommodation preferences

This part of the analysis focuses on determining the platform which the participants prefer to use to search for accommodation before going to or even after arriving to the place they are visiting. They have been presented with 4 options, as well as the option "Other" where they could write down their favorite website or app if it was not included. Although there were no added options, there are multiple combinations to the options presented. The options were:

- AirBnb
- Booking.com
- Tripadvisor
- Google



*Figure 9: All travellers' choice of platform to search for accommodation*

Figure 8 presents AirBnb as a first choice for 50,7% of the overall participants, so more than half. On Airbnb one can only find private homes that are available to rent, which, for a lot of travelers is an option to get the “full experience” in a city they are visiting for the first time. Furthermore, there is full privacy when compared to hostels, mostly there are kitchens available to enable visitors to have home-cooked meals if that’s what they prefer, etc.

Booking.com offers rental private homes as well as hostels and hotels, luxury suites, etc., and offers a comparison of prices from different websites which offer the same hotels or hostels. For 46,48% of the overall participants, Booking.com seems to be a favorite choice of a platform to search for accommodation.

Furthermore, Google was chosen by 30,99% of the participants. On Google it is possible to only enter keywords of how many rooms are needed, for example, and the name of the city, and the search engine results present links to websites who have available offers.

Finally, Tripadvisor seems to be the favorite choice for only 15,49% of the participants when it comes to accommodation.

### 3.5.1 Non-frequent travelers

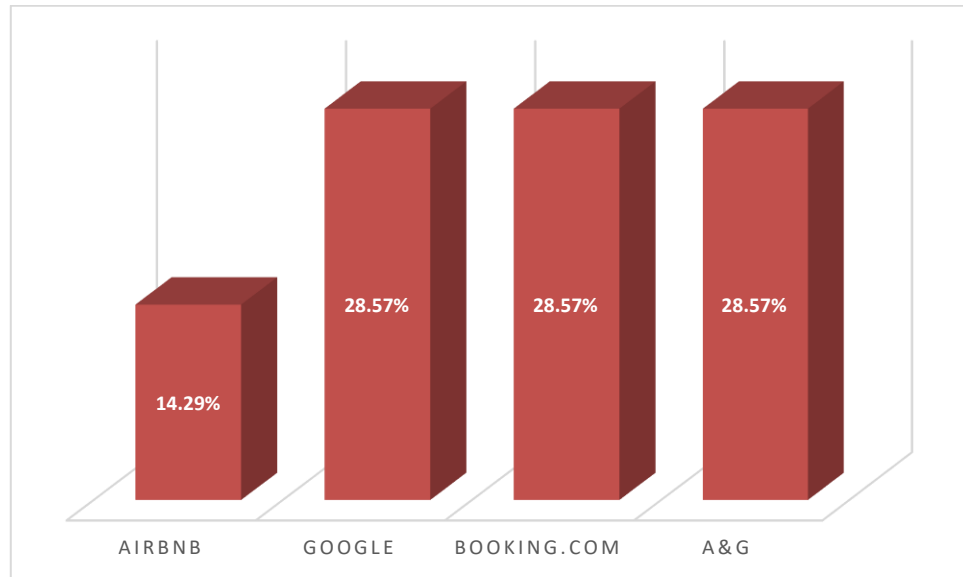


Figure 10: Non-frequent travellers' choice of platform to search for accommodation

Non-frequent travelers have only chosen 4 questions, leaving Tripadvisor as a choice they do not use when searching for accommodation. Instead, they use a combination between two of the other choices. Their 4 choices are:

- Airbnb
- Google
- Booking.com
- A&G – Airbnb *and* Google combined

### 3.5.2 Semi-frequent travelers

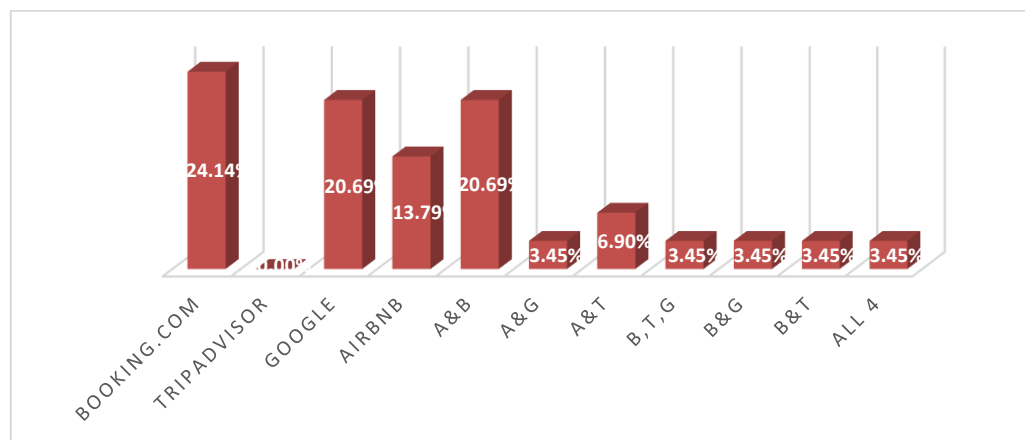


Figure 11: Semi-frequent travellers' choice of platform to search for accommodation

Semi-frequent travelers' choices have many mixtures between choices, which have been put into their own categories in this particular part of the analysis, for a more simple and thorough analysis.

For the reader to understand these mixtures, their meanings are listed below:

- Booking.com
- Tripadvisor
- Google
- Airbnb
- A&B – Airbnb *and* Booking.com
- A&G – Airbnb *and* Google
- A&T – Airbnb *and* Tripadvisor
- B, T, G – Booking.com, Tripadvisor, *and* Google
- B&G – Booking.com *and* Google
- B&T – Booking.com *and* Tripadvisor
- All 4 – Booking.com, Tripadvisor, Google, *and* Airbnb

Booking.com reached the highest percentage in the answers of semi-frequent travelers, followed closely by Google. These travelers have not chosen Tripadvisor on its own as a choice at all, thus the 0%. However, Tripadvisor was chosen only when mixed with Airbnb, Booking.com, and Google.

The highest percentage of the combined options was Airbnb and Booking.com, reaching 20,69%.

### 3.5.3 Frequent travelers

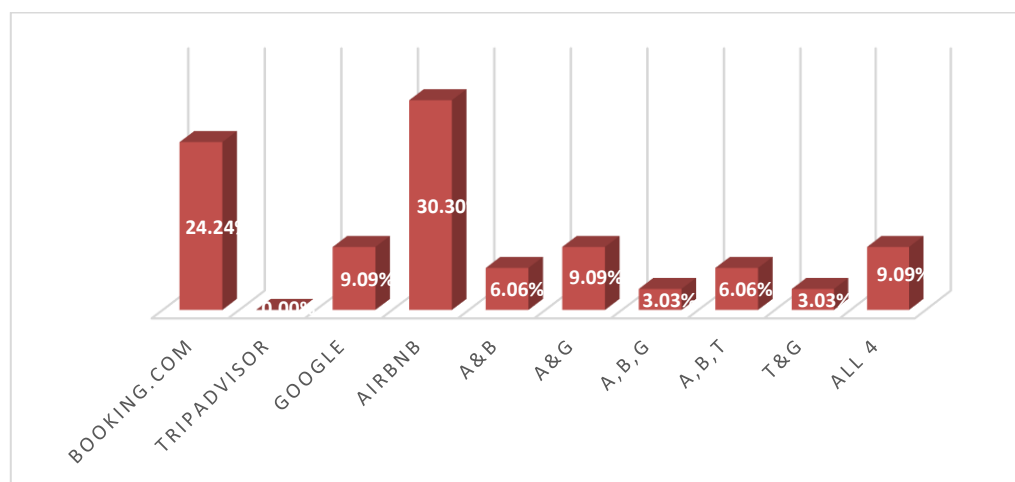


Figure 12: Frequent travellers' choice of platform to search for accommodation

Coincidentally, frequent travelers, similar to semi-frequent travelers, did not prefer Tripadvisor on its own as a choice of platform to search for accommodation either. Frequent travelers had these options and mixtures in common:

- Booking.com
- Tripadvisor
- Google

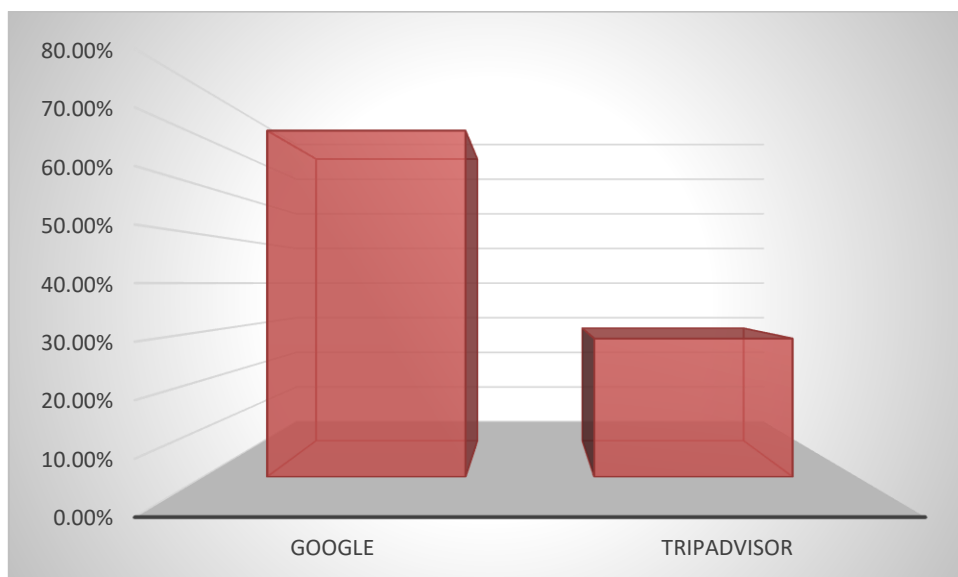
- Airbnb
- A&B – Airbnb and Booking.com
- A&G – Airbnb and Google
- A, B, G – Airbnb, Booking.com, Google
- A, B, T – Airbnb, Booking.com, Tripadvisor
- T&G – Tripadvisor & Google
- All 4 – Booking.com, Tripadvisor, Google, Airbnb

A noticeable difference between this group of travelers and the previous one is that Airbnb got the highest percentage when it comes to platforms which can be used to search for accommodation. Another impressive observation is that none of the participants added different answers to this question, besides the ones that were presented to them. When combined, a few of these options – or all of them, give the users the proper information they need and provide easy and friendly use which attracts them to use these platforms again when they plan another trip.

### 3.6 Dining preferences

When it comes to dining in the city people are visiting, it is very common for them to search for restaurants before going out for the meal they want to have. It is especially important for people travelling with kids, people who have food allergies as well as those who follow specific diets to know about the restaurants' menus before they decide which restaurant to go to. And, of course, most of this information can be found online. Nowadays, if the restaurants do not provide this kind of information online, most visitors won't be attracted to visit said restaurants. As it might work for the locals who do not need to search online for specific restaurants, the same case is not applicable for one-time visitors.

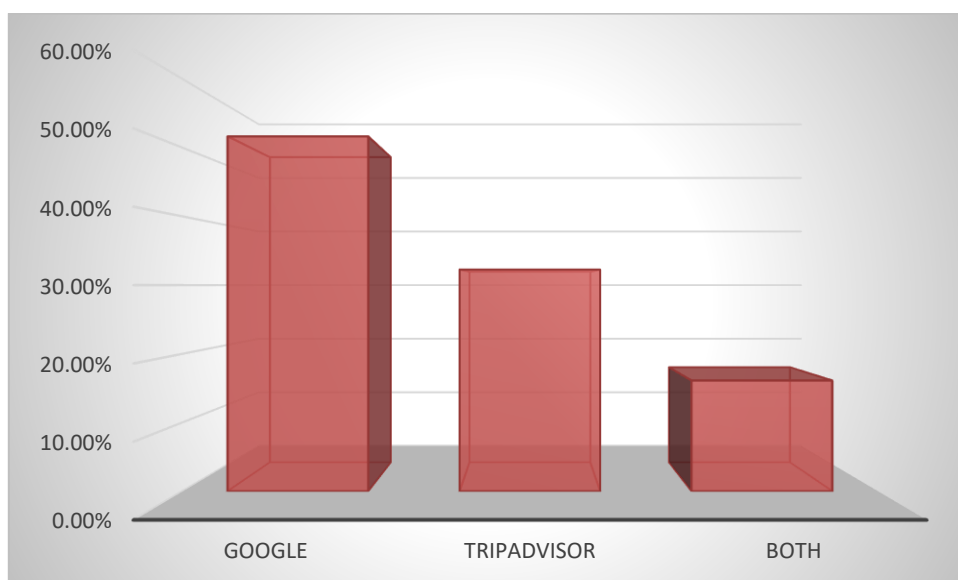
First there will be analysis for the non-frequent group of travelers, followed by semi-frequent and finally, frequent group of travelers.



*Figure 13: Non-frequent travellers' choice of platform to search for restaurants*

Clearly, over half of the non-frequent travelers prefer to use Google to search for restaurants while visiting another city. Between the two choices, Google has reached 71,43%, whereas Tripadvisor has reached 28,57%. No other options have been added to this question, even though the option “Other” was presented to the participants.

Both of these websites offer similar results, although they have unique layouts. Information such as location, opening hours, often even menus as well as the restaurant’s websites, and reviews. Reviews are a great way of helping people decide whether certain restaurants they are interested in suit their wants and needs or not.



*Figure 14: Semi-frequent travellers' choice of platform to search for restaurants*

16,13% of the semi-frequent travelers have made a combination of both choices as their preference of platform to search for restaurants. However,

in this case as well, Google has reached a higher percentage than Tripadvisor.

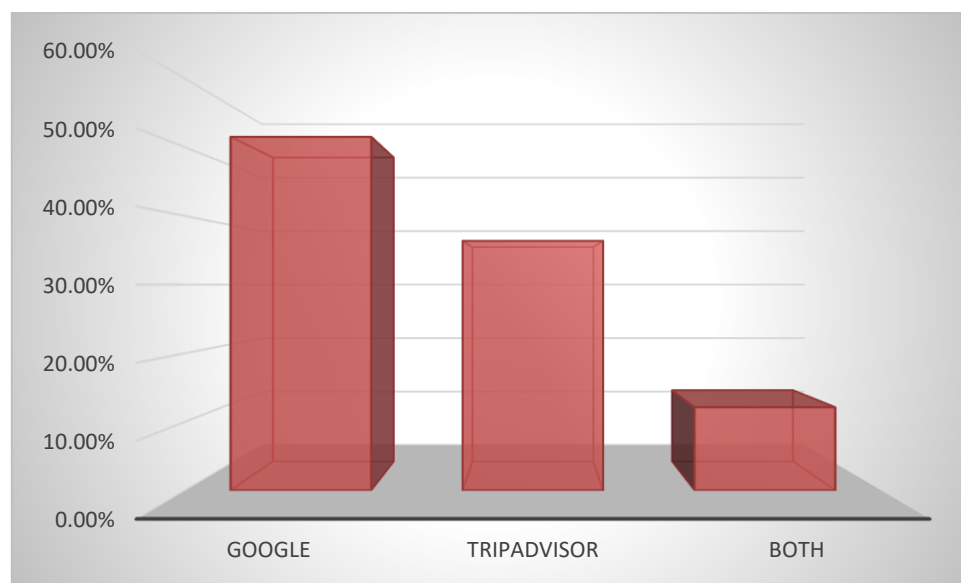


Figure 15: Frequent travellers' choice of platform to search for restaurants

Similar to the two previous groups, Google is the most used platform when it comes to searching for restaurants while traveling. 12,12% of the participants have chosen both Google and Tripadvisor as their choice, whereas 36,36% have chosen Tripadvisor only. 51,52% have chosen Google only, which furthermore proves how easy it is to use and how people have gotten comfortable with searching for every detail they need on Google.

### 3.7 Important factors to be included in the City App

This question was presented to the participants to help this research determine which factors are most important in a City App to attract travelers to use the City App. Through these results, it will be of high convenience to both this research as well as the potential future users of this City App to find everything they are looking for in a City App.

The options presented to the participants were:

- Public transportation timetable, prices, and route
- Parking lots which include information about how many free spaces are available, and price list
- The number of free rooms in hostels/hotels, their prices, and location
- Restaurants, cafes, bars (including menus, prices, location)
- Grocery & other stores (opening hours, location)
- Other

In this case as well, the option “other” was not used at all.

It is of immense importance to identify and analyze these factors, because people have already become comfortable with other platforms through which they search for everything they need, so the City App really needs to stand out in order to be attractive to potential future users.

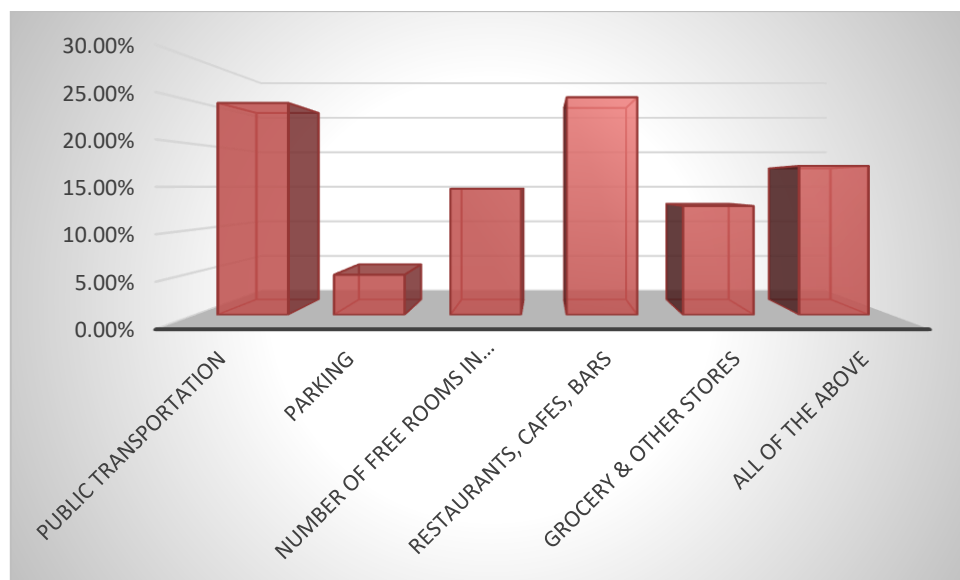


Figure 16: Important factors to be included in the City app

As seen in Figure 15, information about restaurants, cafes, and bars seem to be the most important factors when travelers have arrived in the city they are visiting. Thus, special attention should be paid to this particular section when making decisions and recommendations about the City App.

A correlation between restaurants and grocery stores can be made in this case, and since it is most important to have information about restaurants, cafes, and bars, it indicates that people do not focus that much in buying groceries from grocery stores and cooking homemade meals when visiting other cities. However, even though cooking homemade meals when people are on a holiday might not always be the case, information on grocery stores should not be ignored nonetheless.

Information about parking is only important to 4,70% of the participants, since the three groups of travelers stated that they prefer to use public transportation more than using their own cars or rental cars while visiting another city. Despite the fact that this percentage is somewhat low, information on parking should not be ignored or underestimated. Like every other piece of information, this, too, is a factor that can attract users to not hesitate to use the City App, of course, as long as it offers all the information they need.

Although it is rare that people search for accommodation *after* they have arrived at the city they are visiting, 14,77% of the participants see this option as an important one to be included in the app.

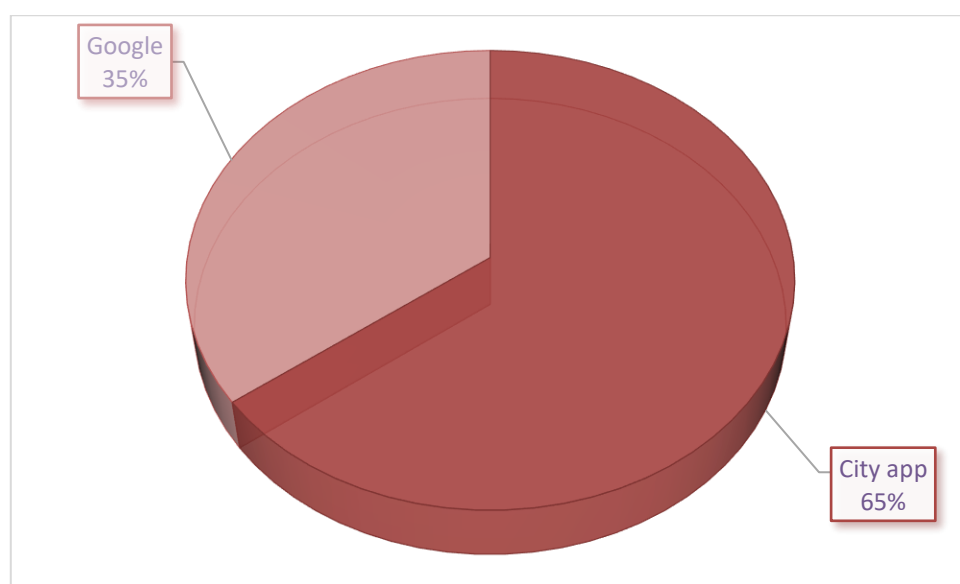
Moreover, 17,45% of the participants stated that all of these options are equally important to them when visiting another city. So, although it is important to know and focus on the parts that are of high importance to potential future users, every option presented to them in this part of the analysis is in some way equally important when it comes to drawing conclusions about how to make the app as more user-friendly as possible.

This part of the survey contains some crucial information on preferences as well as priorities of travelers.

### 3.8 Google vs. City App

The purpose of the final question of the survey is to determine whether travelers would use a City App if it was available in the city they are visiting and if it contains all the useful and necessary components that potential future users want in this app.

The analysis for this particular question will consist of 4 parts. First, the analysis of all of the participants will be done, which will then be followed by a thorough analysis of the three particular groups.



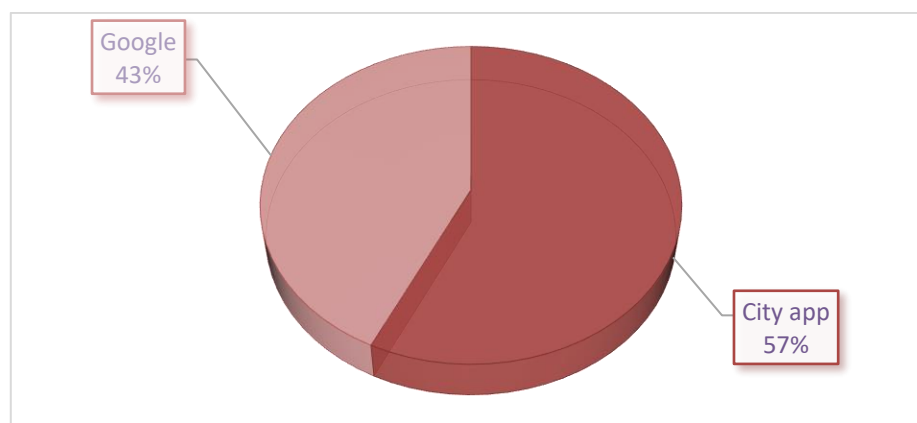
*Figure 17: All travellers' choice of using a City App or not*

65% of the participants have decided that if there is a City App available in the city they are visiting, they would use it. It was especially impressive to see that they had chosen this answer since they had to choose either one of the other, but not both of the choices. Furthermore, in this particular question, the option "Other" was not presented to the participants, since the sole purpose of this question was to find out whether in the future, these participants want to use a City App or not.

This information is highly valuable when analyzing and deciding whether a City App would really be a solution to travelers, no matter how often they travel. The fact that the participants are open to using a City App is a very positive element for this research. In a world where technology is slowly taking over, openness to new, easier, and more convenient alternatives makes it easier for creators to know what people are interested in.

Moreover, a large number of these participants, by choosing Google, Airbnb and such in their answers, have indirectly stated that they are comfortable with the current available options they have. Therefore, the importance of this City App being as user-friendly as possible is of immense importance, since people will hesitate to use it if they can find information faster, in a better layout, and in a handier way in another website or app they are already used to using.

Below, the responses of the three groups will be analyzed.



*Figure 18: Non-frequent travellers' choice of using a City App or not*

The majority of non-frequent travelers have chosen a City App as their preference for helping them find appropriate information while visiting another city. However, 43% of them seem to be comfortable with what Google offers, which, of course, includes real-time information about everything they need to know about a particular city they are in. The comparison between Google and the City App is of great help when analyzing and determining which features the app needs and what should be included in it in general.

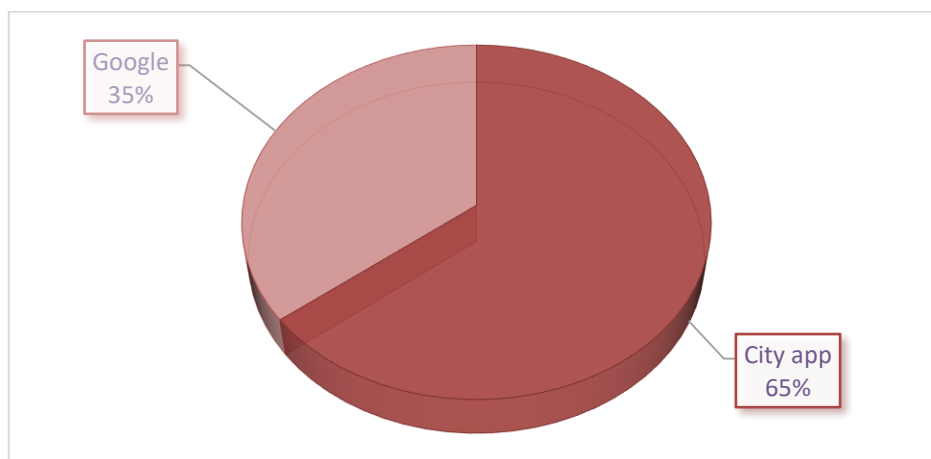


Figure 19: Semi-frequent travellers' choice of using a City App or not

Semi-frequent travelers seem to prefer the City App option as well, as opposed to Google. Those who travel 2-3 times a year can create their habits when it comes to finding information about their trips. A City App would be a great solution for them to find everything in one app which would ideally work offline as well and help make their stay as pleasant as possible.

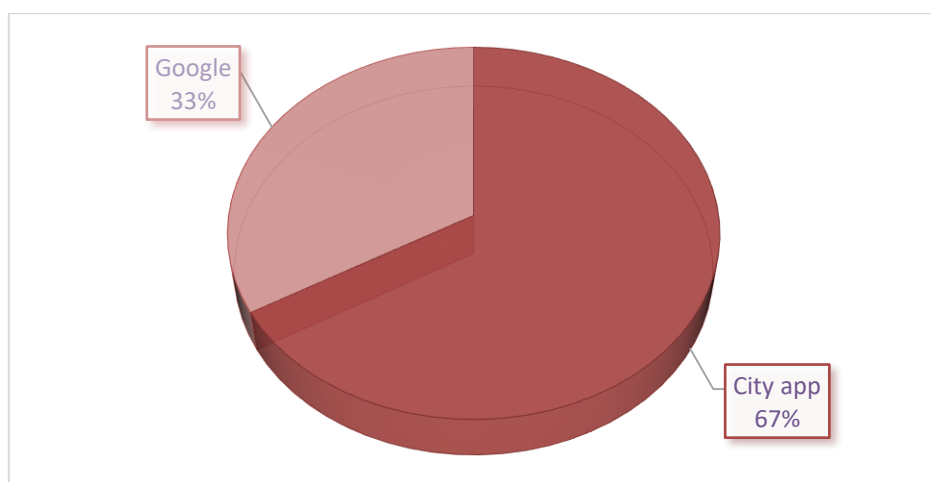


Figure 20: Frequent travellers' choice of using a City App or not

Out of the three groups of travelers, frequent travelers have the highest percentage of their preference on using a City App. 67% prefer to use a City App, whereas only 33% prefer to use Google.

The aforementioned statement about trying to make the travelers' stay as pleasant as possible is applicable in this situation as well, since people who travel often tend to have more knowledge about where to find cheaper, nicer, and more qualitative information about everything they need to know when traveling.

According to the answers of the survey, many recommendations and conclusions can be drawn. As it was undoubtedly one of the most important parts of this research, the recommendations and conclusions will be presented in the last chapter of the thesis.

## 4 RECOMMENDATIONS & CONCLUSION

The final part of the thesis consists of recommendations and conclusion, both of which are drawn from research and data collection.

### 4.1 Recommendations

After having conducted the survey and analyzed the outcome, as well as the research about city marketing, a few issues were tackled and will further be discussed.

#### 4.1.1 Existing City App

The 1<sup>st</sup> recommendation is that in the future, the Krefeld City App should also be available in the English language, since not all visitors speak German.

The survey analysis has presented recommendations as well, which will be thoroughly discusses in this part of the thesis. Due to the fact that the app is currently offered only in German, the research and analysis were affected by this, thus the possibility of making recommendations about what is already offered is quite high.

In order for the visitors to be aware of the existence of this app, special attention should be paid to marketing and advertising the app to non-German speaking visitors as well as German speaking visitors. This can be done through:

- **Sponsoring the ads in websites or apps where train, plane, and bus tickets are bought.** This raises awareness to the visitors that this app exists, and when advertised properly, it will attract them to install and use it.
- **Advertising the app in train stations, airports, and bus stations.** Even after the visitors have arrived in the city, they will see the ads about the Krefeld City App and be attracted to install and use the app.
- **Advertising in social media channels.** This is a quick and efficient way to reach and target audiences, since most people spend a lot of their time in social media. Again, when advertised properly, people will be attracted to trying the app out. However, this form of advertising should only reach people who are living near Krefeld, and through cookies, reach those who search Krefeld online, or book tickets to go to Krefeld.

Furthermore, recommendations can be given about the app's features. As one of the most important factors in the survey answers was public transportation, timetables, prices, and routes, the Krefeld City App could feature Deutsche Bahn App, by putting a link where people could click on to download the Deutsche Bahn App. The Deutsche Bahn App is also offered in English, which is an advantage in this case. As it wouldn't make sense for the Krefeld City App to develop features about public transportation as they are already featured in its own app, the best way to give visitors information about public transportation is by offering the link through the Krefeld City App.

As a high percentage of the respondents prefer to use Google as their search platform, the Krefeld City App could include similar features which are convenient and easy to use. For example, in the search bar, when people are searching for a keyword, the results given will be everything that is related to that keyword, similar to Google searches.

The highest percentage of the respondents, 50,7%, prefer to use AirBnb when they are searching for accommodation. A similar way of searching for private homes, hotels, and hostels could be implemented in the Krefeld City App as well, where it would be as easy and as convenient to do the search as it is in the AirBnb App, for example. This feature could include pieces from other apps as well, such as Booking.com, where prices could be compared between different websites that offer the same rooms, thus helping the visitors to find the most convenient accommodation for their stay.

Regarding dining preferences, information about restaurants such as price range, menus, location, opening hours etc. should be featured in the app, where reviews can also be given and read from different users of the app. They should be categorized based on similar price range, similar location, type of food, etc. As this has resulted in the highest percentage when asked about the most important factors to be featured in the City App, special attention should be paid to the layout of this feature, which should be focused on user-friendliness.

When these features are available in the City App, 65% of the users have responded positively when asked whether they would use it or not. Therefore, the idea of a City App has a great potential, which could easily attract users when all of the most important factors are featured.

The City App is intended to be used by citizens of all ages and backgrounds, thus, it is very important that this app is easy to use and has simple features.

#### 4.1.2 The future of Krefeld regarding digital services

Smart cities will most likely, inevitably, affect Krefeld as well. Regarding digital services, people will be able to do online purchasing even more so than today, as the future promises to be more digitized than it is now.

These services should be planned carefully, including the Krefeld City App, which offers and should continue to offer features to the users which will make their stay in Krefeld easier, convenient, and likeable. When the focus shifts on improving the existing app by applying the recommendations given in the previous sub-chapter, potential visitors will not only be ready to install and use their app, they will also become aware that it will save their time and give them accurate information about where they want to go, stay, and eat.

#### 4.1.3 Benchmarking

Similar to the “Study of the city of Brunswick”, some of the recommendations can also be applied in the Krefeld City App case. The app should unquestionably be available offline as well, since a lot of the visitors, especially those who travel from other continents are not able to find internet connection right away after arriving. This benefits both the visitors and the companies, however, the focus in this case is on the visitors.

The promotion of Krefeld through enabling visitors and residents to use the location of the places they are visiting is another advantage towards promoting the city, which later, these posts can be searched for by visitors to get an insight of what a park in Krefeld looks like, a museum, or a restaurant. This should be promoted as much as possible, although it is quite popular nowadays everywhere.

The use of social media should be implemented as much as possible. Through social media, the promotion and advertising of the city is done in a way that is almost spontaneous, which undoubtedly benefits different stores and restaurants etc., but also the city itself, by promoting historical buildings, museums, parks, etc. Besides promotion, communication through social media is another very important part of people’s lives, since they can solve any problem they have by getting in contact with various companies. The importance of using social media in the city is quite high, thus, a suggestion would be the implementation of hashtags in the city. Whenever residents or visitors are visiting parts of the city, they could use a hashtag which then later other people can find related posts of their interest through.

Finally, an online marketplace would be quite useful in the city of Krefeld, too. Through that marketplace, people could buy and sell things of all

kinds, information could be shared, indirect advertising could be done, all of which benefit the city by the use of technology.

## 4.2 Conclusion

This sub-chapter of the thesis collects all of the information and findings gained throughout the research process, including the answer to the research question.

Referring to the research question “What will the city of tomorrow look like especially regarding digital services?”, there are a few variables to be considered about the smart cities of the future and digital services.

Digital services, which are based online and delivered electronically, are an inevitable part of our future smart cities. In this research, this is linked to the City App since it will provide services in the form of information to the visitors. Through the City App, the visitors will be able to find the information they need as well as to interact with customer support. Nonetheless, this will not only be available to visitors. Many of the features, like mentioned in the Study of the City of Brunswick, will include the residents as well, by enabling them to find information about their municipality and updating that information themselves.

Furthermore, the future smart cities are characterized with more people moving to urban area as well as with people engaging with the government easily through digital platforms. Surveillance will be an inseparable part of the future smart cities, which will include sensors, cameras, wireless systems, etc. Moreover, the infrastructure will become part of the smart city as well. Electric cars, charging stations and new technologies will make traveling by car more efficient and convenient. The importance of sustainability in the future smart city has a deep emphasis, which will enable people to make the best possible use of water, space, and all other resources.

The four objectives of this research were successfully met and analyzed, which helped shape this thesis and the recommendation as well as answer to the research question.

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# City app survey

Form description

How often do you travel? \*

- Once a year
- 2-3 times a year
- 4 or more times a year
- Other...

Which factors are important to you when you are visiting another city? \*

- Public transportation timetable & prices
- Parking
- Suitable restaurants (price range, food allergies, specific diets)
- Grocery stores (opening hours and locations)
- Other stores (clothing etc., opening hours and locations)
- Other...

...

What kind of transportation do you prefer to use when you are traveling? \*

- Public transportation (trains, trams, buses)
- Uber
- Taxi
- Personal car
- Rental car
- Other...

Which option is most convenient for you to search for bus/tram routes, timetable and prices, bus/tram stops, prices for taxis & uber, etc.? \*Please answer only if you chose Public transportation, Uber, or Taxi in the question above. \*

- Google (including Google Maps)
- Public transportation app (if available), example: DeutscheBahn app
- Other...

...

Which app/website do you use to search for a place to stay? \*

- AirBnb
- Booking.com
- Tripadvisor
- Google
- Other...

Which app/website do you use to search for restaurants in the city you are visiting? \*

- Tripadvisor
- Google
- Other...

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If there was a "city app" for the city you are visiting, which factors are most important for you to find in it? \*

- Public transportation timetable, prices, and route
- Parking lots which include information about how many free spaces are available, and price list
- The number of free rooms in hotels/hostels, their prices, and their location
- Restaurants, cafes, bars (including menus, prices, location)
- Grocery & other stores (opening hours, location)
- All of the above
- Other...

If there was a "city app" for the city you are visiting, would you prefer to use it \*  
or would you still rather use Google or other websites/apps?

- City app
- Google or other websites/apps