# MYKOLAS ROMERIS UNIVERSITY FACULTY OF ECONOMICS AND BUSINESS INSTITUTE OF FINANCE

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# USER PREFERENCES OF E-SERVICES IN THE TOURISM AREA FOR IMPLEMENTATION IN X ENTERPRISE

Master's thesis

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#### LIST OF ABBREVIATIONS

- 3D Three-dimensional
- APP Application
- AR Augmented Reality
- ATM Automatic Teller Machine
- GIS Geographic Information System
- GPS Global Positioning System
- INS Inertial Navigation System
- IP Internet Protocol
- ISO International Standards of Organisations
- IT Information Technologies
- LBS Location-Based Services
- PDA Personal Digital Assistant
- SMS Short Message Service
- TV Television
- VR Virtual Reality
- Wi-Fi Wireless Fidelity

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#### **INTRODUCTION**

The topicality of the problem: Nowadays, the Internet has become one of the most influential media and sources of information in information technology converted travel and tourism area also. Understanding how information technologies impact consumer behaviour can assist as a decisive base for businesses to describe and develop effective and sustainable strategies. The use of information and communication technologies is particularly relevant in the tourism area. Because in this area, procurement of e-services for supporting travel and business-leisure purposes needs to fulfil the goals of storing, sharing and managing information in large quantities. Tourism has grown into a modern global economic sector with a rapid growth pace in the recent years. According to the World Tourism Organization's (2016 first quarterly report), in 2020, more than seven hundred and twenty million travellers will spend their holidays in Europe only. Therefore, it is important to contribute to economic value creation and foreign trade in tourism. With an average growth rate of approximately 5 percent over de past decades, tourism has turned into a major constituent of economic development worldwide, in both developed and developing countries. Given the growth and the challenges of the deployment of e-commerce technologies for tourism, research in this area has been growing since the 1990s (Dedeke, 2016), one of the main concerns in the sector is to find out and provide quality e-services. As all businesses, one of the whole foundations of the company is providing effective product/service to customer/user and assures customer/user satisfaction with user preferences. To ensure that the resource allocation is completed to the best result, and all necessary virtual e-services can be provided there needs to be set satisfied e-service in the tourism sector.

**Solving issues:** As e-service systems in the tourism sector rise and enterprises develop their capacities in virtual systems comes to confront endless challenges in providing effective e-services online tourism information resources like websites/apps, blogs and social media in their position. The main **problematic areas** of this thesis are related to investigation and accumulation of e-services in the tourism sector:

- 1. Can tourism business enterprises understand the functionality of e-services and their possibilities as well as effectiveness, and which model can be proper to attract user for being future costumers of enterprises?
- 2. What are the main attributes and their cases of website/apps and systems already in the tourism sector?
- 3. What is the best combination of available e-services as website/apps and systems to implement to X enterprise most effectively?

**The object of the research:** the package of e-services in tourism sector and determination of effectiveness in the virtual e-services by using the example of *Georama*, and implementation in X enterprise.

**The aim of the thesis** – to analyze the concept of e-services and both principal and contemporary e-services in tourism sector, and online information sources, and possibilities of effective e-services through attributes affecting e-service quality, and to recommend the set of a full package of e-services to cover all niches in the tourism sector for X enterprise.

**Detalisation of this goal:** needs to clarify and explore attributes of all e-services currently in the tourism sector, identify the strengths of the example system and combine it with other proper e-services for to make more effective.

#### The objectives:

- 1. To analyse e-services and possibilities of effective e-service in the tourism sector.
- 2. To describe *Georama* and its system and its purpose in the tourism sector.
- 3. To analyse the available and combinable e-services and systems of X enterprise.
- 4. To create empirically a full monitoring and support e-service package and to recommend the full package of e-services for to cover all niches in the tourism sector for X enterprise.

**Methods of research:** investigation of existing e-services, online tourism information sources and effective e-service possibilities in the tourism sector. The data collection and analysis of sample system. The questionnaire with potential users for determining the best combination and the most effective of virtual e-services. As well there were investigated such method for realisation of:

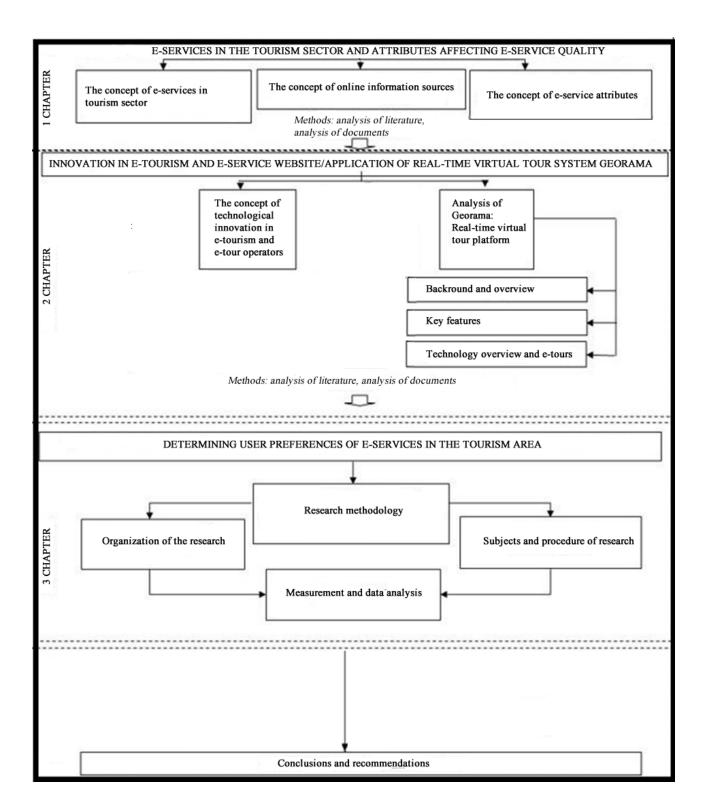
- Identifying Research Motivation and Objective;
- Collecting and Exploring Related Literature;
- Establishing Research Scope and Framework;
- Analytical Review of Literatures;
- Research Method Development
- Data Collection and Analysis.

The structure of the thesis: the whole thesis consists of these main chapters (Fig. 1):

- Introduction
- E-Services in the Tourism Sector and Attributes Affecting E-Service Quality
- E-Service Website/Application of Real-Time Virtual Tour System Georama
- Research Methodology
- Conclusion and recommendations

Also, there are included 20 figures visually highlighting the system in question and 4 tables with specifications of investigated systems.

**The keywords**: E-service, E-service Quality, Effective E-Service, Tourism, Virtual Tour, Live Tour, Real-time Tour, Georama.



(Source prepared by the author)



It is the figure of the visual structure of the thesis which explains parts of the thesis visually.

## 1. E-SERVICES IN THE TOURISM SECTOR AND ATTRIBUTES AFFECTING E-SERVICE QUALITY

The chapter is dedicated to analysing possibilities of effective e-service in the tourism

sector.

E-services in the tourism sector mainly depend on the role of technology in facilitating the transfer of tourism services which make them more of electronic services. Commonly, most of the tourism businesses are interested in developing their internet services. These are chiefly airlines, car rental firms, hotels, travel agencies and tour operators. E-services in the tourism sector exist in e-government as in e-business, especially for public information sharing. A good example of that are the official tourist offices. In the tourism sector, e-services provide the most cost-effective manner of communicating with target markets and disseminating information, representing a quick and easy way for the customer to buy travel products, offer opportunities for improvements in customer service and retention through meeting and promoting individual preferences, reduce costs through increased efficiency in internal operations and purchasing processes, and encourage greater co-operation amongst traditional competitors through the provision of hyperlinks (Strielkowski et al., 2012). However, there are some disadvantages were also identified in the literature. Many customers prefer to handle transactions in a face-to-face with traditional travel agencies and it cause non-use situation. In use situation, traditional travel agency business being superseded and it cause job losses. And for those customers and businesses that don't have access to the necessary technology, it causes inequality and social isolation.

In the tourism sector, adoption of the Internet for travel planning has now reached a level of saturation indicating that the Internet continues to be the number one source of information in trip planning (Xiang et al., 2014). In process of trip planning, journey planner is referred to as one of the most important e-services. It briefly means an IT (Information Technologies) service that shows with the alternatives, prices and time information of going from point A to point B. This e-service provides some solutions for travellers. Top of these solutions is route-planning services, booking and payment, handled data, operational features, comfort service information and supplementary information (Esztergár-Kiss, Csiszár, 2014). Route-planning services mainly contain departure and arrival time, duration, distance, costs, the number of transfers, waiting time, walking distance, details of alternative routes and visualisation on the map. Booking and payment include prices, types of bank cards, payment per mobile, phones, transaction fees; types of vouchers.

Handled data and operational features contain a timetable for a given route and/or date, travel conditions and rules, consideration of planned restrictions, information about current and extraordinary traffic situations, deviation from the timetables; calculation of the probable impacts of the extraordinary traffic situations. Comfort service information includes Wi-Fi, luggage storage, electrical supply, weather forecast, booking a room, car rental, taking out an insurance, shopping, opening time of the shops. Supplementary information contains degree of air pollution, energy consumption, comparison of transport modes, only the planning module or the whole homepage is translated, number of foreign languages, automatic language choice based on IP (Internet Protocol) address; requesting information via e-mail and/ or telephone, reflection opportunities, opinion about travels or services, forum; routes for disabled passengers, information about vehicles, web page for visually impaired people.

However, journey planner is not the only important e-service in the tourism sector. Many travellers are deeply technology dependent in exploring and preparing for their upcoming travel experiences via other e-services with growing number. Especially, with the increase of the importance of social media and mobile devices, travellers started to search for different channels and e-services.

E-services in the tourism sector are composed of two ways as a source of tourism information and online tourism products like website or app for facilitating service operations. In this study, there are both of them in the following sub-chapters. Also, e-services in the tourism sector divided into two parts as principal e-services in the tourism sector and contemporary e-services in the tourism sector with the aim of the easy following and better understanding. In the formation phase sub-chapter of principal e-services, the e-services chose among those which have treated before than others in the literature like booking system, e-forum, event calendar, online information on highlights-online practical information, profiling, radio-television broadcasting, tourist satisfaction questionnaires-satisfaction charts etc. And in the formation phase sub-chapter of contemporary e-services chosen among those which have treated later than others in the literature like an app-based mobile tour guide, real-time live tours, "second-life"-type games etc. In all sub-chapters of the first chapter, the detailed investigation is made by referring to different sources from different fields. The main sources of e-services in tourism sector sub-chapters specified in Table 1 and Table 2.When resources were selected, efforts were made to identify the latest developments in e-services by referring to the latest sources published in recent years.

#### 1.1 Principal E-Services in Tourism Sector

E-services in the tourism sector are composed of two ways: A source of tourism information and online tourism products as website or app for facilitating service operations. This sub-chapter is about online tourism products as website or app for facilitating service operations.

E-Services	Source
Advertising on events	Deuze, 2016
Booking system	Abdullah, Kadhim, 2016
Children-oriented website	Shahbazyan et al., 2016
City Wikipedia	Sato et al. 2016
e-Forum	Sha, Lu, 2015
Event Calendar	Buultjens, Cairncross, 2015
GPS (Global Positioning System)	Husain, Dih, 2012
Kiosks	Chen et al., 2014
One tourist/resident portal	Hsieh et al., 2016
Online information on highlights and	Liu, 2015
Online practical information	
Podcasts/downloads for Podcast Tours	Kang, Gretzel, 2012
Profiling	Petrevska, Koceski 2012
Radio broadcasting	Ponnan, 2013
Thematic search	Ho et al., 2012
Tourist satisfaction questionnaires and	Arana, Leon, 2013
satisfaction charts	
TV (Television) broadcasting	Balli et al., 2013
Wi-Fi (Wireless Fidelity) system	Neuhofer et al., 2015
Video screens in public	Parker, Yoo, 2016
transports/spaces	

Table 1. Principal E-Services in Tourism Sector

(Source prepared by the author)

It is the table of principal e-services in the tourism sector with the list of main sources referenced. This subchapter was further explored by exploiting the sources mentioned above along with the e-services.

There are principal e-services listed below in alphabetical order:

Advertising on events – These are the promotional e-services for the link in with your destination and build a level of prestige for the brand. These e-services are available in the

widespread area from local to national events, each with a particular set of benefits. It would be useful to investigate events that take place in the regions which wish to reach that have a direct relationship with tourism destination. In the literature, about the future of advertising as media work, is that it has a choice to use the contemporary challenges as opportunities to embrace a more critical, ethical, and socially responsible role in this world (Deuze, 2016). It is said that traditional role as the cultural intermediary has become somewhat out-of-date, just as much as the classical editing of the information flow the role of professional journalism is decreasing. In the opinion of the author, new types of advertising are more interesting and remarkable and in that way, the advertising on events taking the interest of event participants.

**Booking system** – Customer's achieved arrangement with a goods or services supplier representing a concluded sale in the virtual field. That e-service also called reservation/ transaction online or one-stop shop booking. With the globalisation and the progress of airline industry, the procedure of reserving a flight and buying a ticket has additionally changed. Since the fast development and utilisation of the internet and mobile technology, mobile applications for reservation services become more common and make life easier (Abdullah, Kadhim, 2016). It is said that this led to reducing the utilisation of manual system tool that spent more time and efforts. We are of the opinion that, it is also being valid on other booking types in the tourism sector, not just in the airline industry.

**Children-oriented website** –This is the child-centred e-service which created to promote a child's personal qualities rather than to provide training or information. With the development of online technologies children start to use them with the growing number. Tablets and smartphones are getting the favourite devices of children. As a rule, those who have older siblings, become active users at a very early age, and they learn by looking at and imitating their brothers and sisters. Children are quick to learn basic operational skills (Shahbazyan et al., 2016). It is said that children see the internet as a given, they do not know what online space serves and how it works. For them, games, films, music simply exist and are there for them to watch and play. In the opinion of the author, children-oriented websites are important in the tourism area for taking their interest to travel. It is better for families when their children willing to travel and it is important to get enough information about their children's possible needs from the website.

**City Wikipedia** – Wikipedia is a very popular site with multiple language versions and more than 30 million articles. It is an online encyclopaedia created and managed collectively by its users. Each Wikipedia article is linked to certain Wikipedia categories and these categories are structured as a hierarchical category tree. Though details of a category differ depending on different language versions of Wikipedia, any Wikipedia version has a similar higher-level category that

covers various fundamental genres/keywords (Sato et al. 2016). We are of the opinion that, Wikipedia gets its importance from being worldwide popularity and containing lots of articles inside also about tourism destinations. This is the reason why it is important to be linked to Wikipedia with correct and sufficient information in this e-service.

**e-Forum** – An e-forum is an online discussion place in virtual space with allowing postponed participation. In tourism, this e-service ensures combining and discussing possibilities between previous visitors, locals, future visitors etc. for collecting information and helping to others. Internet forum's attention is chiefly as visual attention in users' early engagement. Attention resources can be transformed and in the deep participation, users' cognitive attention is more significant (Sha, Lu, 2015). It is said that cognitive attention behaviours' further development will lead to the phenomenon that cognitive attention input is prone to increase faster in the early duration. This means in-depth discussion and interaction are more likely to appear in the beginning steps of the participation. In the opinion of the author, the importance of e-forums and effects to attention are cannot be ignored in the tourism area. Most of the travellers apply and examine e-forums before then determining to a future destination.

**Event Calendar** – It is the schedule of events which tourist can find general information such as event date, time, place, price etc. online. Events are an important part of the tourism sector and provide cultural, environmental and social benefits to the destination and to the participants. Events can assist a destination to overcome any seasonal visitation troughs, resulting in a more viable industry (Buultjens, Cairncross, 2015). It is said that events can also help attract investment by capturing attention and exposure. We are of the opinion that event calendar gets it's important from being driving power to increase the number of participants with informing.

**GPS** (**Global Positioning System**) – When GPS and LBS (Location-Based Services) using at the same time, LBS solutions can deliver relevant information according to the user's current location using position information and smart applications. LBS can retrieve the user's location through any Global Positioning System (GPS)-enabled mobile phone, through the location services provided by the mobile operator (Husain, Dih, 2012). In the opinion of the author, mobile phones are used by almost everyone and location-based service technology could be free and accessible like GPS for users. The technologies connected with LBS positioning technology, GIS (Geographic Information System) technology and Location Management Functions. Positioning technologies are used for identifying the position of the client's device. GIS provides a map and geographical data such as the locations of buildings, streets or other geographic identifiers. Location management functions manage and process the position information and GIS data. In the opinion of the author, LBS play an important role in the development of the mobile tourism sector because LBS are the recommender system can use to filter personalised tour information more specifically. That is the reason why LBS should be work with the recommender system to allow it to show up with personalised tourist information for users.

**Informative desks** – It is the e-service as shows location of physical tourist information desks on the web/app or providing informative desk services online.

Integrated system–This e-service is mainly about alerting with tailored information.

**Kiosks** –This e-service named as self-service kiosks. Business travellers preferring to use the kiosks whereas leisure travellers prefer to interact with guest service agents for their overall customer delight (Chen et al., 2014). We are of the opinion that, the kiosk can be developed for leisure travellers for using same purposes of business travellers. In that way, it can provide time and energy saving for businesses. Travellers' and leisure travellers' percentage distribution depends on country to country. Generally, leisure travellers' numbers are higher but travellers' numbers are on important level also. In addition, kiosks can also be utilised a source for visual tourist information. It is also beneficial to understand in which ways of kiosk system can provide more convenience, such as getting information about local areas, maps etc.

**One tourist/resident portal** – Tourism development depends on host residents' attitudes because of many reasons as they are key stakeholders in decision-making and provides the labour power for tourism planning etc. Another key stakeholder consists of the tourists who visit and spend money in the residents' area and also favour tourism development. To promote sustainable tourism development, local government and tourism developers should create a sustainable economic system that would generate income and employment for residents who expect positive tourism to have a positive economic impact (Hsieh et al., 2016). In the opinion of the author, having tourist/resident portal has importance on tourism development and it should implement for all destinations.

**Online city offices** –They are the e-services in e-governance systems which precisely for tourists and tourism. Usually, they are related with country's ministry of tourism and municipality of city/town.

**Online information on highlights** – It is the highlighted online information usually with visual support which includes videos, pictures etc.

**Online practical information** – It includes online information about transport timetables, consulates and hospitals contact, currency and ATMs (Automatic Teller Machine) etc. Also with this online practical information on websites, there is mentioned the importance of online reviews in the literature. It is important to recognise that while the abundance of online consumer reviews in travel-related social communities makes it easy for travellers to find information, it is difficult for

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them to process and judge useful information (Liu, 2015). It is said that the general travel information available through social media enables people to spend lower costs/efforts that stimulate the search for information online. We are of the opinion that, online reviews are important as much as available online practical information on the website also.

**Podcasts/downloads for Podcast Tours** –Podcasts are usually digital audios or recordings, usually part of a themed series that can be downloaded from websites. That is the reason why they named in some studies as downloads also. Podcast tours can contain various recorded information including general information, comments of experts and even real visitors' narratives. It would be beneficial to offer multiple audio tour delivery options and multiple download options for podcast tours in order to address different levels of innovativeness and technology familiarity (Kang, Gretzel, 2012). In the opinion of the author, podcast tours enhance their importance with existing in growing number of the destination.

**Profiling** –It is the e-service of extrapolating information about a personal-based on known traits or tendencies. The development of such software module contributes generally to increasing the awareness of tourist destination that is capable of fulfilling travellers' preferences (Petrevska, Koceski 2012). Tourist profiling is the almost same logic with consumer profiling. We are of the opinion that, profiling could provide benefit to tourists as guidance depends on their preferences and tends to touristic areas.

**Radio broadcasting** –Community radios are a good example for the purpose of tourism. Its services appeal to a specific audience and are influenced by the community in which it operates. At that way, we mean by the community as tourists. The radio interactively engages members of its society, seeking solutions to issues from the social context, while in reality resorting to holistic problem-solving (Ponnan, 2013). In the opinion of the author, radio broadcasting is useful to reach aims such as seeking solutions to issues also in the tourism sector.

SMS (Short Message Service) alert with highlights – Sending SMS to the tourist (or arrivals) emergency case numbers or critic nature events information such as health services contact number or storm danger etc.

**Thematic search** – Online searching became the primary and dominant source of tourism information; it did not serve as a substitute for other traditional information channels, however. It indicated that tourism information search is a time-consuming activity due to its iterative characteristics (Ho et al., 2012). In the light of this information, we could say that tourists reach the main source of information via thematic web search. We are of the opinion that, searching is the first step of determining future travel location so this e-service gets critical importance from that.

**Tourist satisfaction questionnaires and satisfaction charts** –The information elicited from tourist satisfaction questions are commonly utilised for ex-ante design and ex-post assessment of tourist policies in a variety of contexts aimed at improving the level of satisfaction of different segments of tourists (Arana, Leon, 2013). Travellers usually get satisfaction from their experience and from the consumption of tourist services given by the attributes of tourist destinations. For the improving the system, feedback would be the substantial source. Also, it shows effort for development and relevance of travellers' ideas. Satisfaction charts mostly used for comprehending situation easily and visually. In the opinion of the author, tourist satisfaction questionnaires and satisfaction charts have critical important for developing e-services as being an after service.

**TV** (**Television**) **broadcasting** – TV shows and films are the so important channels for attracting people's attention. Most of the world's population have used visual media to entertain themselves and spend their leisure time (Balli et al., 2013). We are of the opinion that, although TV broadcasting is a service that has been used for a long time, it still preserves its importance today. Usage of these channels in tourism sector would be beneficial for developing. In this topic, studies are more about marketing but it would be useful to have precise TV channel just for tourists that provide information and possibilities to do in the area.

Wi-Fi (Wireless Fidelity) system – It is also well-known fact that reaching the internet so important for the tourist. Public Wi-Fi services get importance from that. It is the way of reaching fast information via the internet and providing this service to tourists has played one of the key roles during their travel. Moreover, the availability of Wi-Fi hotspots and free Wi-Fi provided by the tourism service providers play a critical role in forming ICTs use, requiring Internet access, on the move. Only if these features are provided, tourists can undertake specific activities, such as connecting to networks, sharing experiences in real-time, getting directions and accessing information (Neuhofer et al., 2015). It is said that the common lack of free Wi-Fi provision by tourism service providers is considerably limiting the opportunities to connect, access real-time information and share experience online. In the opinion of the author, Wi-Fi system becomes a necessity with the increasing use of mobile devices.

Video screens in public transports/spaces –Using video screens in international accepted language as English for a touristic purpose such as general information transfer to traveller would be beneficial. Public transports and spaces exist in almost every city and visual effects would take the interest of travellers easily. In the literature, this subject mentioned as public displays which are widely used for displaying messages to large groups of people for different purposes like advertisements, guide ways or warnings. The proliferation of public displays has also lead to them being ignored either through people assuming the content is irrelevant to them or they get lost

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among other objects in the public space vying for attention (Parker, Yoo, 2016). It is said that adapting or personalising the content could make the displays more relevant. We are of the opinion that, video screens in public transports/spaces can be critical and beneficial channels for travellers especially with the aim of guide ways or warnings.

*The conclusion of Sub-chapter 1.1:* E-services in the tourism sector have reached widespread variations on the internet. There are principal e-services exist with different aims as marketing, booking and mostly informative. Also, there are some e-services with mix-aims like informative and marketing (e.g. event calendar). E-services can be supportable by other electronic devices as radio, television, public displays and by other technological developments like GPS and Wi-Fi systems. E-services can work in different phases as before travel (e.g. booking system), during travel (e.g. podcasts/downloads for podcast tours) and after travel (e.g. tourist satisfaction questionnaires and satisfaction charts).

#### **1.2 Contemporary E-Services in Tourism Sector**

All of the e-services in the tourism sector are developing day by day but there some of them founded and developed most recent. This sub-chapter is about most recently online tourism products as website or app for facilitating service operations.

E-Services	Source
Guided tours and App-Based Mobile	Zillinger et al., 2012
Tour Guide	
Interactive maps	Roth, 2013
PDA (Personal Digital Assistant)	Kabassi, 2013
systems	
"Second-life"-type games	Y. Huang, S. J. Backman, 2016
Video reconstructions of city	Singh et al., 2014
Virtual tours	Lee et al., 2013

Table 2. Contemporary E-Services in Tourism Sector

(Source prepared by the author)

It is the table of contemporary e-services in the tourism sector with the list of main sources referenced. This subchapter was further explored by exploiting the sources mentioned above along with the e-services.

There are contemporary e-services listed below in alphabetical order:

**Guided tours and App-Based Mobile Tour Guide** – Guided tours are multi-faceted, situated designed and continuously developed in order to meet needs from new audiences around the world. From this, it could be concluded that the importance of guided tours is continuously growing, as tourism becomes more and more a globalised phenomenon (Zillinger et al., 2012). Providing information of tours online and e-booking possibilities on the web page are supportive for guided tours, this e-service provides a connection between travellers and guided tour service. Also in the research about traveller acceptance of an app-based mobile tour guide (Lai, 2015), the author mentions a traveller can install a travel app in his mobile device; this mobile device then becomes a tour guide. E-services can serve as a tour guide nowadays. In the opinion of the author, app-based mobile tour guides can take place of tour guides not completely but widely in the future.

**Interactive maps** – It is the dialogue between a human and a map mediated through a computing device to emphasise digital interactions (Roth, 2013). We are of the opinion that, interactive maps can be more beneficial to use by being specialised for users purposes. Online mapping is the collection and publication of websites that provide extensive graphical and text information in the form of maps and databases. Online mapping services are used in the tourism sector usually for determining geographical locations, finding landmarks and businesses, getting addresses and phone numbers and planning trips.

**PDA** (**Personal Digital Assistant**) **systems** – This e-service is mostly used for planning a whole trip or organising different aspects of a trip such as selecting accommodation, destination, routes etc. depends on personalising with info delivery. The systems used for supporting cultural tourism use different methods of personalisation or intelligence to become useful and, therefore, attract users. To this direction, many systems are developed for mobile phones or PDAs (Kabassi, 2013). In the opinion of the author, PDAs will be one of the indispensable e-services of the human life.

**Real-Time Live Tours** – Tour through this system is the way to the virtual tour of attractions in real time. There is a term named online travellers who use these kinds of e-services. Nowadays, it is mostly used during decision making for next holiday destination. But the author thinks that it would be more prevalent when it used by who does not have the opportunity to travel particular destinations with these service in the future. We will analyse this e-service deeply in the second chapter with the example of Georama real-time live tours' e-services.

"Second-life"-type games – these types of games aims to improve the tourism development of specific regions by enhancing the destination accessibility. Second life has been used by the travel and tourism industry as a collaborative and commercial tool for communicating with travellers as well as tourism enterprises in the areas of destination marketing, business management (Y. Huang, S. J. Backman, 2016). It is said that second life has also been used by the travel and tourism sector as a collaborative and commercial tool for communicating with travellers as well as tourism businesses in the areas of destination marketing, business management. We are of the opinion that, "Second-life"-type games to be used in many areas in the future for different commercial purposes will be developed and succeed. Second Life can offer possibilities for potential tourists to do activities for their interests and it can provide the chance to acquire new abilities for the feeling of competence, and presence likelihood to from satisfying relationships that had an influence on travellers' purposes to visit an actual destination. It is a new and developing technology in the area.

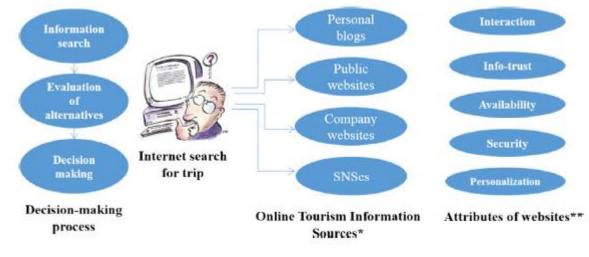
**Video reconstructions of city** – It is an efficient flexible capture and reconstruction system for the automatic reconstruction of large scale urban scenes. This system is both backpack and vehicle mounted allowing capture of interior or less accessible areas as well as large outdoor scenes (Singh et al., 2014). In the tourism sector, this system via capturing the 3D (Three-dimensional) geometry of existing cities through computer vision techniques and with help of GPS and INS (Inertial Navigation System). In the opinion of the author, this e-service's visual richness would be provided and used in the sector for many beneficial purposes.

**Virtual tours** – Virtual tours being one of the principal applications of VR (Virtual Reality) technology. By allowing users to travel within a simulated environment, a virtual tour gives an opportunity to visit places that are remote in space and time (Lee et al., 2013). Also in Lee's research, there is information about AR (Augmented Reality) technology as one of the newest technology which using in the tourism sector. For the virtual tour, creating 3D models is generally simpler than building a physical copy of the touring setting and it is possible to use the same VR equipment for providing different virtual tours. Virtual tour system should be accessible, compatible, immersive and interactive. We are of the opinion that, with the growing of technology this e-service could save time, power and cash of users.

*The conclusion of Sub-chapter 1.2:* E-services in the tourism sector have reached widespread variations on the internet. There are contemporary e-services relatively new than other e-services. Some of them still in their early stages like "second-life"-type games and all of them actively developing e-services. Also in these e-services, we come across virtual concepts like app-based mobile tour guide – application which serves as a guide, virtual reality, augmented reality etc.

#### **1.3 E-Service Information Sources and Attributes**

In the e-service of the tourism sector, there are currently four main online information sources that are used for describing the services provided on the internet. These are personal blogs, public websites, company websites and social media websites (also apps for all of them). And there are main five attributes of these websites/apps. These are interaction, info-trust, availability, security and personalization.



(Source: No, Kim, 2015)

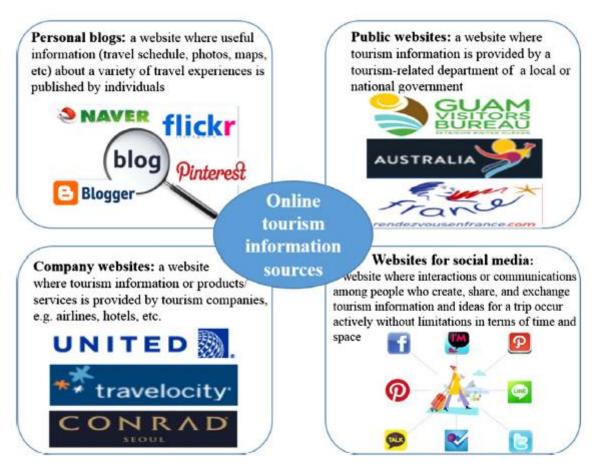
Figure 2. E- Service Information Sources and Attributes

It is the figure which starts from decision-making process as the internet search for the trip and online tourism information sources for this search. In their study, they mention main attributes of websites as interaction, info-trust, availability, security and personalization for online tourism information sources.

*The conclusion of Sub-chapter 1.3:* This sub-chapter have the features of introduction to following two sub-chapters: Online tourism information sources and attributes affecting e-service quality.

#### **1.4 Online Tourism Information Sources**

E-services in the tourism sector are composed of two ways: A source of tourism information and online tourism products as website or app for facilitating service operations. This sub-chapter is about online tourism information sources.



(Source: No, Kim, 2015) Figure 3. Types of Online Tourism Information Sources

It is the figure of online tourism information sources which defines personal blogs, public, company, social media websites summarily with some well-known tourism information sources' logos for the first identification as introductory.

The types of online tourism information sources are listed below in alphabetical order:

**Company websites/apps** – A company website/app is an information place managed by a business or another private enterprise to give specific information about a business or service. Companies like airlines, car rental companies, hotels and travel agencies offer services to the public via their website and apps. Usually, there is a possibility to make payment of tourism services on the company websites/apps through an online payment system. Online travel agency sites and company sites are the foremost choices of travel planners if they are looking for prices of tourism products (Wang et al., 2016). It is said that appears the selection of online channels will be more focused on a limited number of channels once the features of the trip are decided. It is also possible to obtain travel information linked to that a particular business area. A company can be defined as a site/app for tourism information or products and services provided by tourism companies like airlines, car rentals, travel agencies etc. In the opinion of the author, secure payment systems are among the most important issues for users and companies need to pay attention to this issue as well as the importance products and e-services. Also offering free e-service trial has critical importance in the area.

**Personal blogs** –Travel blog mainly means the internet travel journals. Generally, in diary form, a travel blog usually contains personal thoughts and reviews on a specific destination, personal travel stories and details of trips; it is frequently updated and presented in chronological order (Wang, 2012). A blog is one of the principle platforms for the people in sharing information in accordance with their own interests (Chen et al., 2014). Blogs have newly shown market potential in the tourism sector and travel ads on popular blog sites have steadily increased. We are of the opinion that blogs are an essential tool for determining the needs or interests of tourists. The development of information technology and a growing number of travel blogs allow target marketers to track service qualities at an affordable cost and improve their travel experience. Also, travel blogs are rapidly becoming a popular new source of reading material for travel fanatics or web users. It mostly includes sincere texts, nice photos and even videos at first hand. Through that, potential travellers having the possibility to share and access other persons' travel experiences.

**Public websites/apps** – A public website is a site made by a local, state or national organisation (Søruma et al., 2012). As it is in the description, public websites/apps in tourism sector also include the sites provided by the national tourism organisations. Web sites/apps related to tourism sector have been prepared to inform tourists or to support tourism in order to increase the number of visitors. In the opinion of the author, public websites/apps have the feature of being a driving force for tourism when it is invested because it gets financing from the country. These websites/apps may define as an open source as a site related to tourism or a site provided by a local or national government agency.

**Social media** – Social media services are web-based services that connect users worldwide. Social media refers to the way in which interactions and communication occur between people who produce and share information and ideas. This information involves interests, experiences, opinions or real-life links. Users share relationship-based information and this information serving as a new popular tool in social media sites. For example, travellers publically post information on destinations, and they also scrap and share travel-related information provided by others (Chung et al., 2012). Social media can be defined as websites/apps where interactions or communication take place among people who create and share tourism information such as trip plans. This information may include experience with travel activities and opinions. Furthermore, the information on the social media is accessible anytime in any place, with the recent development of

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technology and the widespread adoption of mobile devices, it became popular among online travellers. Web sites/apps for social media are so various such as post, photo, video, real-time moment sharing species. We are of the opinion that social media has a separate significance because it is an information source that can support all other sources of information.

*The conclusion of Sub-chapter 1.4:* Online tourism information sources are company websites/apps, personal blogs, public websites/apps and social media. All of these sources types has crucial importance in the tourism sector. These resources constitute the whole of the tourist information retrieval system and travellers chose the websites/apps according to their preferences.

#### **1.5 Attributes Affecting E-Service Quality**

Attributes affecting e-service quality are accessibility, information-trust, interaction, personalization, content, design-structure, learnability, memorability, navigation, performance, privacy and security. Before then define each one separately, there are attributes categories and sub-categories stated on Table 3 for the first identification as introductory.

Category	Sub-category
Accessibility	Design Satisfies
	Accessibility Needs
Interactivity	Computer-mediated
	Communication
	Real-time Communication
	Dialogue
	Interactive Decision Aids
	Transaction-related vs. Non-transaction related
	interactivity
Personalization	Recognizing Visitors
	Customization of Content
	Tailoring
	Explicit and Implicit Personalization
Privacy and Security	Personally Identifiable Information
	Transmission of Transactional Information
	Lack of Control
	Trust
	Assurance Seals

 Table 3. The Categories and Sub-categories of Attributes

Content	Organization
	Layout, Headings and Styles
	Readability
	Current and Timely Information
	Complexity
	Informative Product Pages
Learnability	Familiarity
	Consistency
	Generalizability
	Predictability
	Simplicity
Design - Structure	Website Design
	Homepage
	Graphical Interface
	Page Background
	Colour Consistency
	Information Structure
	Text Consistency
Navigation	Know Where They Are
	Easily Return
	Search
Performance	Efficiency
	Product Differentiation and Comparisons
Memorability	Interface Memorability

<sup>(</sup>Source: Muhtaseb et al., 2012)

It is the table of the categories and sub-categories of attributes affecting e-service quality. This table refers the study of applying a multi-criteria satisfaction analysis approach based on user preferences to rank usability attributes in e-tourism websites.

Tourism-related researches on issues such as website success factors, web evaluation factors, equality factors, e-satisfaction factors and attributes related to social network websites or blogs in connection with the attributes or properties of online tourism information sources (No, Kim, 2015) shows these main attributes:

Accessibility –It is about services that are acquired by a website/app can be used without difficulty. Accessibility is a feature that shows that travellers can easily access and use online tourism information resources. In the literature, there is a research which made for blind users and it is beneficial to take some statement from this research because of accessibility is more

shows itself on sight-disabled people. Accessible websites were considered to be innovative and related to progress and evolution, while non-accessible ones were regarded as conservative (Aizpurua et al., 2016). It is said that a clear relationship between lame and lack of accessibility as well as between exciting and accessibility was observed in this study. In the opinion of the author, tourism websites need to cover every kind of disabled people with using special visual and auditory solutions. It is a gap in the tourism area.

**Information-trust** –Information is necessary especially in tourism sector because tourism mostly is an information-based sector. Quality information is presented by online tourism information sources and it has to provide the needs and expectations of users. Information quality is the ability of the system to convey the intended meaning of information (Wang, Lin, 2012). Trust is often closely related to security but information-trust is described as a characteristic that indicates the user's perception of the level of trust associated with information provided by resources. It is a combination of knowledge quality and trust structures that correspond to the information confidence dimension. We are of the opinion that, information-trust is the most important feature because tourism e-services mostly information based so users need to have true and good quality information.

**Interaction** –Interaction is a feature that facilitates operations such as real-time feedback and effective communication. This would include information or idea sharing between a user and an administrator (Kim et al., 2012). In the opinion of the author, information or idea sharing should not be limited to the user and the administrator but also the interaction between the users should be provided on e-services. Researches show that high interactivity with real-time communication enhances cognitive satisfaction in communication with the website/app.

**Personalization** –Personalization composed adapt communication within consumers and the website/app. This dimension requires individual designs for users according to their preferences for resulting the best online practice. Being able to accurately predict the user's preference does not directly inform us to what extent such recommendation approaches are suited to increasing consumer trust in the recommendations (Nilashi et al., 2016). It is said that being able to accurately predict the preferences allows us to achieve more precise forms of personalization and higher user satisfaction. We are of the opinion that personalization is directly proportional in terms of the user's service adoption.

**Privacy and Security** –It is used to describe web site features in many areas because users are sensitive regarding the potential abuse of providing personal information. Security is a feature that shows that a website can show itself reliably in the protection of a user's personal information. There are also other attributes in literature related to usability, usability is crucial to the success of the venture (Muhtaseb et al., 2012). In ISO (International Standards of Organisations) 9241-11, usability is described as "The extent to which a product can be used by specified users to achieve specified goals with effectiveness (fit for purpose), efficiency (taking less time to achieve a particular task) and satisfaction in a specified context of use". In the opinion of the author, above attributes and usability features are inseparable and, both effects e-service quality. The major categories of usability are listed below in alphabetical order:

**Content** – It is mainly about the informing and processing capabilities of a website/app. A well-organized website/app will be perceived as fewer complexes and more user-friendly and will improve the quality of a user's experience. Most website/app designers agree that having a lot of information can be of little value unless it is logical and easy to understand how to organise information. Content dimension addresses the intrinsic information content issues that are geared toward providing users with accurate, relevant, and complete information (Yoo et al., 2015). There are some aspects of information quality in the literature which as information accuracy, information relevance and information completeness. We are of the opinion that, information trust and content attributes are different even though there is a tight bond between them. Content is more about organising the information on website/app.

**Design-Structure** –It is important for the web/app designers to design the website/app in such a way for easy understand the model. In the literature, there are some beneficial articles which link to trust and design structure also. Providing initial trust in well-designed websites leads to gaining trust from mobile customers (Nilashi et al., 2015). It is said that the most operative method of developing mobile trust can be obtained by applying website design elements of mobile commerce.

Website design has been defined as aesthetics characteristics, organisation as well as regulation of online website in the manner satisfactory and attractive way. In the opinion of the author, design and structure should be innovative also with the other features above.

**Learnability** –Learnability refers to how easy it is for new users to learn the interface and perform tasks on the website (Hundert et al., 2016). It is concerned with the characteristics of the interacting system that enable users to understand how to use it at first, and then how to reach the maximum performance level. A well-designed interface should be easy to learn quickly and efficiently.

We are of the opinion that learnability is the most influential feature on the continuation of the use of the e-service. Users may stop using an e-service that is difficult to learn and choose an easier alternative.

**Memorability** – It refers to the ability of an ordinary user to use the interface effectively after an interval. Memorability is the ease of memorising the Web design and navigation after a period of non-use, few errors indicate easy to recover if error befalls and users' satisfaction measure how users' feel when browsing the Web. In the literature, memorability treats mostly in the e-learning topics as an attribute because of the importance of memorability in e-learning area is high. The distinctiveness factors were the representational characteristics of the e-learning interface; these factors included the organisation, consistency and structure of the representation (Al-Samarraie et al., 2016). In the opinion of the author, we can mention these distinctiveness factors affecting to memorability also from Al-Samarraie's statement.

**Navigation** – Website/app navigation should be easy to understand and use by providing clear tags that explain what a user will find when they click. Navigating the website/app provides enough navigation preferences for users to find what they want, and should not present the user with too many overloaded options. Menus make the process easy for the user to browse the website/app and get information. One way of making navigation intuitive and content discoverable is to provide carefully placed hyperlinks (Paranjape et al., 2016). It is said that, for instance in Wikipedia the links that connect articles are essential for presenting concepts in their proper context, for letting users find the information they are looking for and for providing an element of serendipity by giving users the chance to explore new topics they happen to come across without intentionally searching for them. We are of the opinion that, navigation is the feature that has the most effect on ease of use.

**Performance** – Websites need to be used efficiently in order to provide a high level of performance. Website/app productivity means a steady performance stage of a specialised user. Service differentiation and benchmarking tools can also help users select and optimise decision-making. In the opinion of the author, websites and apps need to have a streamlined algorithm for continuity and usability.

In their meta-analytic review about e-service quality (Blut et al., 2015), they are constructing their research on terms from the literature as website design, fulfilment, customer service, security, overall e-service quality, customer satisfaction, repurchase intentions and word-of-mouth/interaction. When we investigate the definitions, we notice that definitions and attributes on above are so similar and concentric which means quality depends on these above attributes.

*The conclusion of Sub-chapter 1.5:* The nature of e-services operations in the tourism sector makes it essential for designers to consider certain usability attributes, like the navigation, personalization, and security and design structure of the websites/apps in the development process. Website/app

attributes and usability have great importance for attracting users. In the tourism sector, being able to give sufficient and useful information has critical importance for the quality of e-services.

#### **1.6 Conclusion of Chapter 1**

E-services in the tourism sector have reached widespread variations on the internet. The nature of e-services operations in the tourism sector makes it essential for designers to consider certain usability attributes, like the navigation, personalization, and security and design structure of the websites/apps in the development process. Website/app attributes and usability have great importance for attracting users.

Without noticing of information source type as a company, public, personal or social media websites/apps all of them should be user-friendly and efficient in content. In that direction, these are provided to user satisfaction and trust. Integrating high-quality attributes to the e-services is the critical effective factor for attracting users and present benefit.

Also interactive content may be useful for websites/apps in the tourism sector. Through that, users may be enabled to customise and personalise the websites/apps. Web sites/apps should be logically organised, interaction must be consistent, navigation should be smooth and information must be easily reached in time.

# 2. INNOVATION IN E-TOURISM AND E-SERVICE WEBSITE/APPLICATION OF REAL-TIME VIRTUAL TOUR SYSTEM GEORAMA

Information communication technologies are transforming tourism all around the world. Redesigned information communication technologies have increasingly created a new paradigmatic concern by changing the sector structure and extending numerous opportunities and threatening. Information communication technologies have the power to support the globalisation of the sector by offering tools for consumers to define, customise and get tourism products, and to develop, manage and distribute presentations worldwide. Frequently information communication technologies play a crucial role in the competitiveness of tourism organisations and destinations. Information communication technologies are becoming an important determinant of organisational competitiveness.

Developments in technologies' capacities reduce the reliability of numerous terminals and applications, compliance and interconnection, and the cost of equipment and information communication technologies. Information communication technologies are an important tool that can provide advantages for promoting and strengthening the strategy and operations of the tourism sector. In today's very high level of competition, quality internet services are a need for travellers. Need to identify challenges such as customer friendly websites, regular update of information and innovative payment gateway and find a remedy in a speedy manner as possible which promotes sustainable growth for e-tourism sector and for the country (Anupriya, Rajasekaran, 2016).

#### 2.1 Technological Innovation in E-Tourism and E-Tour Operators

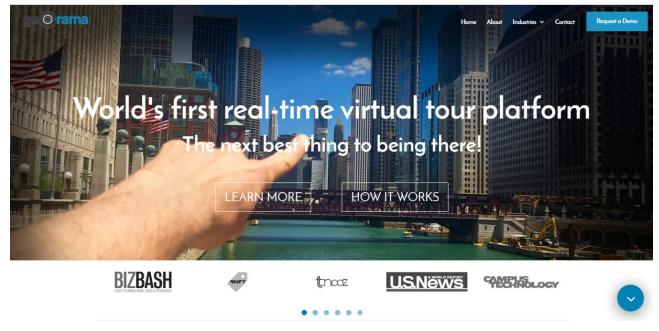
Creativity and innovation are terms that are based on the competitiveness and success of companies and organisations that are now more than ever nowadays. Innovation and creativity, as well as individual characteristics, can be highly preferred by a number of environmental factors. This is especially valid in the tourism sector, where competitiveness is only partially attributable to individual operators but depends on the characteristics of the destination in which they operate. In that kind of fast growing and mainly informative-based sector like tourism should take advantage of the benefits of the development of information technology. In a rapidly evolving technological world, a standardised and interoperable environment has become an indefeasible element for companies that want to take advantage of modern technologies (Baggio, 2014). Technological innovations are mainly developing by e-service providers, e-service entrepreneurs and e-tour operators.

The Internet gains flexibility in both consumer choice and service delivery processes with e-tourism. Customers start to want more from e-services and to be more selective with the increase of technology. This is due to the high level of service and a significant increase in the standard of living. As a result, tourists demand higher quality products/services and expect to save their time also. After getting to a number of tourism services and being exposed to a number of destinations, they become experienced. And expect better services from e-tour operators in the electronic environment to learn objectives and communicate their needs and supply quickly to suppliers. Tour operators should constantly interact with all partners, including accommodation and travel policies because of the importance of information and communication technologies for the distribution of tour operator packages in the tourism sector. Timely coordination and exchange of information are important to ensure that tour operators coordinate activities, resolve potential problems, and ensure that their needs are communicated to all managers who provide tourism services. However, it is quite evident that tour operators will need to shift their focus from the information provision and the reservation mechanism to a strategic role of adding value to the product and the process. Tour operators will, therefore, need to re-assess their core values and identify specific market segments that they can satisfy in the future (Bethapudi, 2013).

The conclusion of Sub-chapter 2.1: In that kind of fast growing and mainly informative-based sector like tourism should take advantage of the benefits of the development of information technology. Technological innovations are mainly developing by e-service providers, e-service entrepreneurs and e-tour operators. Customers start to want more from e-services and to be more selective with the increase of technology. As a result, tourists demand higher quality products/services and expect to save their time also. E-tour operators should find niches in the market and provide solutions for customer needs. Next sub-chapter is about an e-tour operator which found niche and solution for customers.

#### 2.2 Georama: Real-Time Virtual Tour Platform

Georama is a real-time virtual tour e-service provider company which defining itself as the world's first real-time virtual tour platform. The company defines its vision as to help anyone travel anywhere in the world instantly. Especially, when people can't travel with the reasons like financial or physical limitations, Georama's technology helps them go there virtually; in real-time via mobile and interactive live video tours.

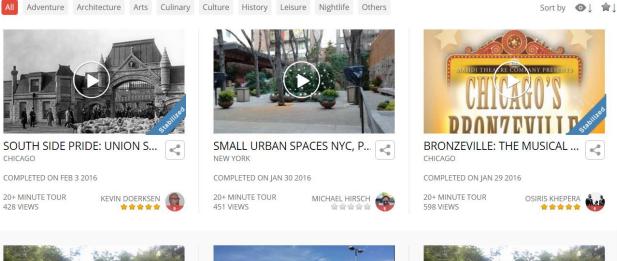


(Source: georama.com) Figure 4. Georama's Home Page

It is the figure of Georama's one of the homepage of the website – georama.com (other one georama.tv). As we can see in the figure there are links to the industries which they are providing services and in below, there is their partner's list also.

The company offers live guided tours in the high-definition video which enables organisations and individuals to provide these tours with low latency and high reliability from a smartphone, wearable camera or 360° camera to viewers around the world. The system has interactivity attribute so the viewers can interact in real-time to ask questions and make suggestions thereby controlling the experience in all real-time virtual tours. Company claims as its focus point enabling real-time virtual experiences that are mobile, authentic, and personalised.

According to this focus, Georama's patent-pending platform and enterprise grade technology is customised for fitting in a wide area as campus tours, destination marketing, educational field trips, field training and research, site visits etc.









(Source: georama.tv) Figure 5. Georama's Past Tours Video Library

It is the figure from Georama.tv's past tours' video library. The product of these live tours is the recorded video library which content that can be strengthened as additional marketing. Online travel agencies developed the tourism sector and real-time virtual tour providers can be the destination for virtual travel.

Following information about real-time virtual tours and Georama mainly collected from business and technology news websites and the links stated in footnotes.

According to builtinchicago.org (Chicago's hub website for start-ups and technology), Georama is mobile software technology company which based in Chicago and has \$1.41M funding.<sup>1</sup>

Bloomberg defines Georama in their company overview as develops a Software-as-a-Service interactive travel discovery platform for tourism related institutions, agencies and brands. The platform offers holiday recommended solutions to help travellers find a perfect vacation; and new generation target marketing needs, interactive sales tours and proxy experience solutions for personalised campus tours. The company was founded in 2012 and has additional offices in Chicago and Illinois in the US and India.<sup>2</sup>

In brief, Georama is a video technology platform that connects massive quantities to a group of people who are travelling in real time anywhere in the world. These viewers can also live

<sup>&</sup>lt;sup>1</sup><u>http://www.builtinchicago.org/company/georama</u> [Watched 2017-04-04]

<sup>&</sup>lt;sup>2</sup><u>http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=304910519</u> [Watched 2017-04-04]

with the topic group via Twitter and Facebook comments to help direct the virtual experience through two-way participation functions. The platform opens up new ways for target marketers to show meeting attendees and entertainment consumers new local travel products and experiences, and respond to increasing mobile connectivity and social interaction requests at arrival meetings and events. People may not go where they want to go because of logistical, financial or physical reasons. An alternative approach is needed that can provide the necessary knowledge without spending significant time and money.

For the last 20 years, some companies have focused on helping people to travel physically, but we believe it is a bigger opportunity to help those who cannot travel. Georama application Georama's consumer site serves as a market for Georama's Android application, wearable camcorders, and guides for touring with 360-degree camcorders and getting stable HD streaming videos. Tours are free to view but users pay to ask questions such as asking guides to check certain landmarks or to make requests. There are already some services that have high-quality online tours. Potential competitors like Periscope for real-time tours.

Georama differs with low-latency software and people in poor network coverage are still able to view live video in HD quality and focus on being compatible with as many virtual reality headphones as possible. Georama's consumer site already has 30 guides in cities.<sup>3</sup>

#### 2.2.1 Georama's Background

Georama's founder and CEO are Nihal Advani. According to angel.co (a start-up meeting website), he was ex-program manager at Microsoft and he also worked for Google. The website defines Advani as a digital marketing guru in search, display and social technologies.<sup>4</sup>

The start-up has been around since 2012. But before then, in 2006, Georama was a map-based travel search site which already has an app for the Windows Store that helps travellers for determining next destination with vacation ideas as a travel planner. It was a personalised program which depends on travellers' free time for travel, interests etc. but Georama's strategy has changed. The founder is explaining this strategy cause of change with competition difficulty in the online travel planning sector. Georama, therefore, decided to focus on the tours for people who could not get into long distances but still have wanderlust.<sup>5</sup>

<sup>&</sup>lt;sup>3</sup><u>https://techcrunch.com/2015/09/23/georama-virtual-tours/</u> [Watched 2017-04-04]

<sup>&</sup>lt;sup>4</sup><u>https://angel.co/georama</u> [Watched 2017-04-04]

<sup>&</sup>lt;sup>5</sup><u>https://channel9.msdn.com/Blogs/Every-dev-has-a-story/Nihal-Advani-Founder-CEO-of-Georama</u> [Watched 2017-04-

<sup>04]</sup> 

### GEORAMA

2006 founded	PRIVATE status	11-50 Employees	
SEED LATEST DEAL TYPE	\$325K latest deal amount	\$775K total amount raised	

Description

Developer of a map-based travel platform. The company develops a virtual travel platform that offers information and recommendation services to help travelers in finding the vacation destinations.

Website: www.georama.com

Ownership Status Privately held (backing)

Financing Status Venture Capital-Backed Primary Industry Information Services (B2C)

Other Industries Social/Platform Software Primary Office 222 West Merchandise Mart 12th Floor Chicago, IL 60654 United States



(Source: pichbook.com) Figure 6. Georama's Background

It is the figure of Georama's background which explained by pichbook.com including the information of founding date, company status, employee number, description of the company and other main information about past of the company.<sup>6</sup>

### 2.2.2 Key Features of Georama and Comparing with Attributes Affecting E-Service Quality

The country, state and city-level tourism organisations can benefit from Georama's live virtual travel tours solution to market their targets to broad audiences. Georama's tours are transforming the target market, allowing targeted travellers to explore a sense of what it might look like to visit a destination. Travel guides equipped with smartphones, wearable cameras or 360° cameras and Georama's technology can give their viewers a preview of their future journeys in HD.

Live HD Video: Live high-resolution video for good viewing experience with automatic recording.

<sup>&</sup>lt;sup>6</sup><u>https://pitchbook.com/profiles/georama-profile-investors-funding-valuation-and-analysis</u> [Watched 2017-04-04]

Low Latency: The one-to-many flow of applications to ensure accurate real-time interaction.

**Stabilized Video:** Stabilise the gyro to ensure a smooth and stable viewing experience.

**Increased Reliability:** Increased reliability by combining cellular and WIFI networks, by the way, total bandwidth at the same time.

**Real-time Interaction:** Viewers are engaged in real time with personalised experience (comments, questions, and more).

**Cross Platform:** It can be viewed on all devices - computers, tablets, smartphones and virtual reality.

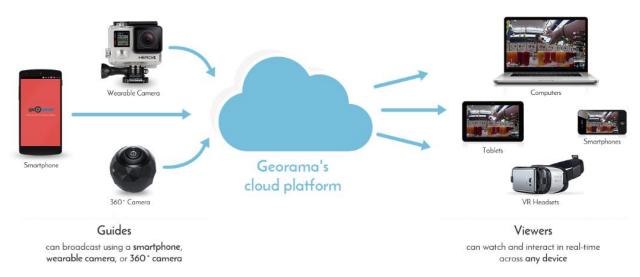
**Seamless Integration:** Integrate the experience with a simple copy / paste of an embed code into the website.

**In-Depth Analytics:** It enables to know who is watching when and where also give possibilities to create custom forms or surveys to get to know viewers.

**Specialised Software:** Expert enterprise class software with various customised options and a solid admin panel for each vertical.

## 2.2.3 Georama's Technology Overview and E-Tours

Georama provides the hardware and software to stream live virtual tours in HD quality for any device or website. The technology is easy to use and can only be opened with a few buttons. Georama's solution comes with an admin panel that allows you to schedule and manage tours, create customised surveys and view in-depth analysis. Tours are embedded in your website without any problems, and Georama can transfer data to customer relationship management panel. All live videos are recorded in high resolution and made available for optional viewing.



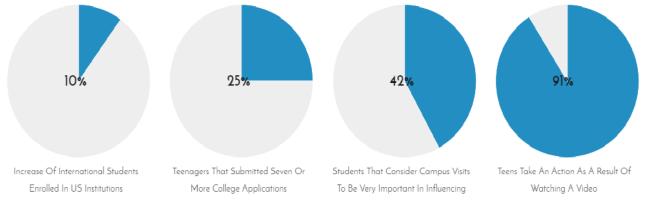
(Source: georama.com) Figure 7. Technology Overview of Georama

It is the figure of technology overview of Georama which explains visually the technology using the guides and viewers and their relation with Georama's cloud platform also. In addition to this live virtual travel tour e-service, Georama has specialised e-services for B2B which includes business, education and cultural tourism too. The following information is about e-services of Georama in different areas:

Live virtual campus tours –Campus visits are an important part of a student's decision-making processes. However, all candidate students cannot organise physical trips to all colleges or universities being considered. Georama's live virtual campus tours solution is a good choice of being physically located there. Using Georama's technology, campus guides can provide live virtual tours that will allow potential students and parents to interact with your guide in real time and ask questions. It can show the campus, classrooms, dormitories, places, near areas etc. them personalised, mobile and interactive, and preview what it's like to join the organisation. Georama's solution provides interaction, personalization, reliability and data on and above static images, produced videos and panoramas. Universities and colleges can get benefit from better marketing of physical tours to the digital world, marketing a wider audience in a personalised way, and increasing state and international practices and enrolments.

**Live virtual educational field trips** –Field trips can provide a learning experience for students. Unfortunately, physical trips can only be done very often and cannot go so far because of financial and/or logistical reasons. Virtual field trips can take place here. Georama's live and mobile virtual field trips are like offering a new way of bringing the outer world into the classroom when a physical journey is not possible.

Georama's technology makes it easy for students to make interactive tours with realtime specialists, giving them a personalised, engaging and fun learning experience by asking questions and offering suggestions on what to see. Experts can show their perspectives live and in HD while they are fully on the move, inside or outside. Students who together in a class or remotely can watch and interact with any kind of computer, tablet, smartphone or VR headset. There are many possibilities for the live virtual space. The types of live virtual trips include STEM education, art and history, career paths, language immersion, vocational tours, etc.



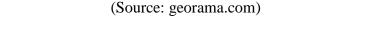


Figure 8. Relevant Statistics of Live Virtual Educational Field Trips

It is the figure of relevant statistics of live virtual educational field trips with the graphs of increase of international students enrolled in US institutions, teenagers that submitted seven or more college applications, students that consider campus visits to be very important in influencing and teens take an action as results of watching a video.

**Field training and research live virtual tours** – Companies can take benefit of live virtual tour solutions to deliver personalised experiences to employees, customers and partners. Georama's technology is helping them get there almost instantly when people cannot go where they want to go because of time or budget. Georama trying to change the way of doing business by offering scalable and affordable options for education, recognition and research in virtually everywhere in real time. A smartphone and Georama's patented software with a guide or host can transfer the viewpoint in HD to viewers on any device anywhere in the world. Audiences can interact in real time with the guide or host to control their experience according to their needs and can be captured in a variety of ways for data, analysis and insights. The guide or host is mobile and provides complete flexibility when travelling in and out and interviewing others when necessary.

viewing. In addition, any customization is possible depending on usage. Types of companies to benefit are manufacturing, retail, consumer packaged products, agents and brands.

Live virtual site tours – Field visits or field reviews are very important in the decision-making process. Internal stakeholders, partners or customers do not always have the time or budget to visit all the locations they want to inspect or review. Georama's solution enables people to view a live virtual tour of a place anywhere in the world. They can show the decision makers the areas they want to see, answer their questions, and immediately alleviate their suspicions - even if they are not there. This is a very useful service that goes beyond static photographs and produced videos and panoramas. Decision makers benefit from personal and authentic tours that help them gain the information they need to make the right decisions while saving time and money. All live tours are private and secure and are recorded as an organiser for on-demand viewing and documentation. Sites and types of visits are a hotel and congress centres, airports and airports, corporate and industrial, construction and real estate, conference and event planning, vacation rentals and holiday rentals.

*The conclusion of Sub-chapter 2.2:* Georama is a real-time virtual tour e-service provider company as an e-tour operator. Georama's technology helps individuals and businesses go the destinations virtually; in real-time via mobile and interactive live video tours. Georama has specialised e-services not just for the tourism sector, also for business and education too. The specialised tours for these different areas are live virtual campus tours, live virtual educational field trips, live virtual site tours, field training and research live virtual tours.

#### 2.3 Conclusions of Chapter 2

In that kind of fast growing and mainly informative-based sector like tourism should take advantage of the benefits of the development of information technology. Technological innovations are mainly developing by e-service providers, e-service entrepreneurs and e-tour operators.

There is a new and trend term in the literature as "online travellers" for the people who are not able to physically travel but would like to travel. E-tour operators can find solutions for online travellers also. An online travellers' purpose can be choosing next destination as people who are able to travel but not sure where to go and, learning new things via real-time virtual tours and other alternative e-services.

Georama's e-service concentrated on one niche as a start-up and not includes other beneficial e-services like to give main information of places (or transportation) and not link with other related useful websites (e.g. accommodation websites). There are more than these e-services which can fit properly to each other.

# 3. DETERMINING USER PREFERENCES OF E-SERVICES IN THE TOURISM AREA

### **3.1 Research Methodology**

As e-service systems in the tourism sector rise and enterprises develop their capacities in virtual systems comes to confront endless challenges in providing effective e-services online tourism information resources like websites/apps, blogs and social media in their position.

The methods of the research are investigation of existing e-services, online tourism information sources and effective e-service possibilities in the tourism sector. Also, the data collection and analysis made of sample system. The questionnaire prepared for potential users to determining the best combination and the most effective of virtual e-services. As well there were investigated such method for realisation of:

- Identifying Research Motivation and Objective;
- Collecting and Exploring Related Literature;
- Establishing Research Scope and Framework;
- Analytical Review of Literatures;
- Research Method Development
- Data Collection and Analysis.

### 3.1.1 Organisation of Research

The major objective of this study is to find out, which e-services reside in the tourism sector; what users preferences and expectations from them, how to measure them in terms of quality and, finally the best combination of these e-services. Regarding this find out, giving suggestions and recommendations to business enterprises and future researches in conclusion part is the important part of the aim of research also.

User preferences are defined as the individual tastes, as measured by utility, of various bundles of e-services. They permit the consumer to rank these bundles of e-services according to the levels of utility they give the consumer. Consumer preferences are becoming frequently known by online sources. Younger people expect to communicate online through forums and social media. Also, attempt to listen to consumers' needs through online sources as well. Young users between 18 and 25 prefer generic online messages rather than individual communications through e-mail. That is the reason why questionnaire request sent to the attendees via online messages too.

The best way to find out what your customers are preferred is to ask them. Measuring customer preferences provides to understand what the priority of users' in the area is. By analysing answers from different attendees, trends can be recognised and suggestions from customers can be presented. As X business enterprises have already adopted such e-services like the real-time virtual tour as Georama and implemented into their system the main question remains the compatibility and best combination coverage. Considering a number of elements and structures in the system it is more than advisable to inspect all the areas covered by selected e-services so that the reliability and stability of provided e-services would be guaranteed.

In the study, survey research used to collect data and find out answers to our questions with the questionnaire. It is prepared to measure the factors of the study based on literature reviews. The short open-ended and closed-ended question type questionnaire is prepared with multiple options to collect reliable and fast data collection. For this investigation, the student has made a questionnaire to international students as potential/future customer/user to collect, understand and synthesise information into one article.

The research work is accomplished through establishing a questionnaire evaluating different users' perspectives about the e-services in the tourism sector and the existence of e-services' attributes that affect the success of electronic tourism websites/apps and to what extent e-service activities are considered in e-tourism websites/apps.

The questionnaire involved mainly on preferences questions and other questions which explained below of the study. The online questionnaire was sent to 125 international students and 88 replies were returned. Results are converted to a table for analysing. The questionnaire is prepared in English and, includes 17 questions in total. The data is collected by using the online questionnaire service "Google Forms". The online questionnaire was sent to students' contact e-mail addresses via e-mail or, social media accounts with submission text. The titles about e-services of this questionnaire were divided in the proper manner to relevant e-services in the tourism sector. For clearer understanding and deeper investigation also public sources were used to complete the thesis. For the investigation, official e-services sources were selected and listed in literature section at the end of this paper.

### 3.1.2 Subjects and Procedure of Research

The online questionnaire targeted the international student population who used etourism services. The evaluators were international students who studying in Europe including American, Armenian, Austrian, Azerbaijani, Belgian, Brazilian, Bulgarian, Chinese, Czech, Dutch, French, Finnish, German, Georgian, Greek, Hungarian, Indian, Indonesian, Italian, Japanese, Kyrgyz, Libyan, Lithuanian, Luxembourgish, Mexican, Moldovan, Moroccan, Pakistani, Polish, Portuguese, Romanian, Slovak, Spanish, Swiss, Taiwan, Turkish, Ukrainian and Vietnamese citizens.

The main reasons for choosing international students as a targeted sample are two; one of them international students are current travellers and the other one international students are able to understand the terms of the questionnaire. The respondents were asked to evaluate the importance of the e-services, attributes and some other setters which indicated below. Attendees self-administered the questionnaire and for each question, they were asked to mark the response which considered the following level of importance according to their preferences. Also, they were asked about other setters which mentioned below. Respondents were connected to an online questionnaire specifically developed for the purposes of this thesis, where they could answer the questionnaire and obtained the main explanation about the research subject.

The main explanation of the online questionnaire was at the head of the questionnaire. After that explanation following the title of the questionnaire was about demographic questions about the respondent and questions about the respondent experience in e-services transactions. Attendees were not allowed to view other attendees' responses in order for the answers to be unaffected by someone else's opinion. The total number of international students who participated in the evaluation was 88. Among those 39 were male and 49 were female; 75 were between 18-25 years old and 13 were between 26-40 years old; 1 was PhD student, 46 were the master students and 41 were the bachelor students.

All evaluations were gathered in a period of two weeks. The social media messages were sent to the attendees during these weeks of the evaluation process; this message contained specified on the questionnaire. Respondents were asked to answer all questions in the questionnaire by necessity so that all the necessary information for the study could be gathered.

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### 3.2 Measurement and Data Analysis of Research

As already stated, questionnaires have been developed to evaluate the extent to which the e-services, attributes affect the effectiveness of e-tourism websites according to user preferences and opinions. Users were asked to give a score for the extent each e-service, attribute and opinion for a tourism website/app. According to study, the e-services that received the highest importance score were ranked as the most "must be" e-service on website/app. The design of the questionnaire involved a literature search in considering the best possible types of questions and scales to be included.

The investigated e-services and attributes are based on literature review. They were selected to establish a relevant relationship with the study. The questionnaire's questions were revised to combine suggestions and explain unclear questions. The questionnaire included just one short open-ended question for determining attendees' nationality and 16 close-ended questions designed to evaluate users' preferences towards e-services and attributes and, can be found in the supplements part. For consistency, this study only focuses on e-tourism websites/apps and their e-services and attributes. There are parts of questionnaire below for clearer understanding.

### 3.2.1 Informative E-Services Preferences

The concept of e-service represents the obvious application of utilising the use of information and communication technologies in different areas. As this description shows, e-services based on information and communication. Informative e-services take an important part in all e-services. In the questionnaire, one part divided and designed with the title of "Informative E-Services". There were most relevant e-services below of this title. The question was "How important do you consider the following informative e-services for a tourism website/app?" And options were about importance according to attendants' preferences. Sorting evaluation was 1 to 5. Relevant e-services:

**City Wikipedia** – The related question asks importance of having "Read more" link to Wikipedia on website/app.

**e-Forum** – The related question asks importance of covering online discussion place or remarking the link to related e-Forums on website/app.

**Event Calendar** – The related question asks importance of including event calendar or remarking the link of relevant event calendar website/app.

**Integrated system** – The related question asks importance of including alert with tailored information on website/app.

**One tourist/resident portal**– The related question asks importance of including links to tourist/resident portal on website/app.

**Online city offices**– The related question asks importance of including links to the eservices in e-governance systems which precisely for tourists and tourism. E.g. country's ministry of tourism and municipality of city/town on website/app.

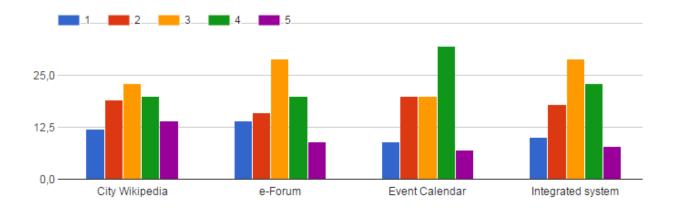
**Online information on highlights** – The related question asks importance of including the visual online information which includes videos, pictures etc.

**Online practical information** – The related question asks importance of including online information about transport, timetables, consulates and hospitals contact, currency and ATMs (Automatic Teller .Machine) etc. on website/app.

**Podcasts/downloads** – The related question asks importance of including a podcast on website/app.

**Radio and TV broadcasting** – The related question asks importance of indication of internationally radio and TV broadcastings' information on website/app.

**Thematic search** – The related question asks importance of containing to thematic search line on website/app.



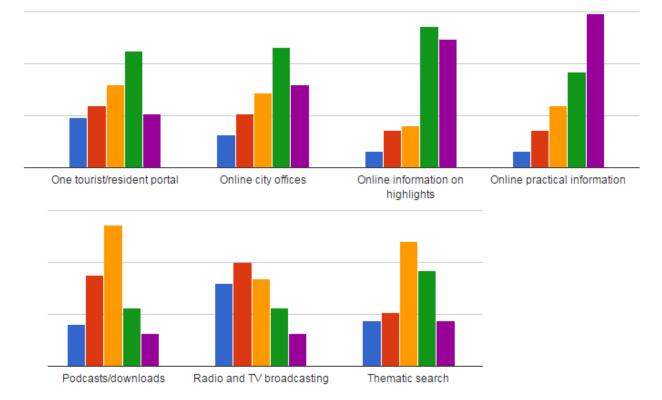


Figure 9. Informative E-Services Preferences

It is the figure of the informative e-services preferences; it explains consideration of informative e-services importance for tourism related website/app by the attendees. This part of questionnaire results showed that online practical information and online information on highlights are required e-services for all tourism related website/app.

Also,grades of event calendar, one tourist/resident portal, online city offices are high. City Wikipedia, e-forum, integrated system, podcasts/downloads and thematic search got medium importance level by the attendees. Radio and TV broadcasting determined less important by the attendees.

### 3.2.2 Online Maps Preferences

A map gives a miniature "picture" of a very large area and it is important in many areas including tourism. An online map is the version of the map online which used by different helpful purposes. In fact, online maps are relevant with informative e-services a considerable extent but this chapter divided separately because of map importance in the tourism sector. In the questionnaire, one part divided and designed with the title of "Online Maps". There were most relevant e-services below of this title. The question was "How important do you consider the following e-services in online maps for a tourism website/app?" And options were about importance according to attendants' preferences. Sorting evaluation was 1 to 5.

Relevant e-services:

**GPS (Global Positioning System)** – The related line asks importance of locating with GPS on the online map.

**Informative desk points on map** –The related line asks importance of showing informative desks on the online map.

**Interactive Maps** – The related line asks importance of being able to interact on the online map.

**Online information on highlights** –The related line asks importance of including the visual online information which includes videos, pictures etc. on the online map.

**Online practical information** –The related line asks importance of including online information about transport timetables, consulates and hospitals contact, currency and ATMs (Automatic Teller Machine) etc. on the online map.

**Wi-Fi points on map** – The related line asks importance of indication of Wi-Fi points on the online map.

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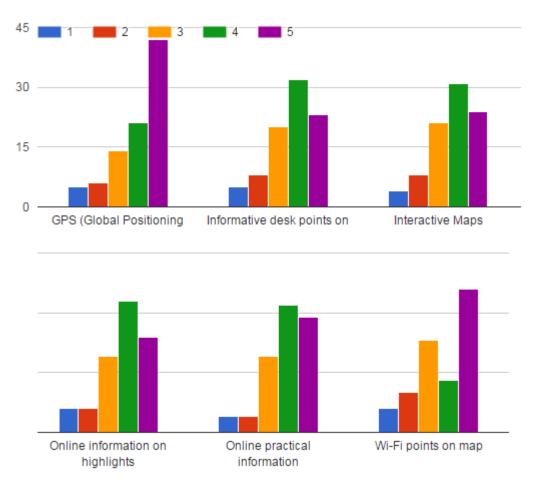


Figure 10. Online Maps Preferences

It is the figure of the online maps preferences; it explains consideration of e-services importance in online maps for tourism related website/app by the attendees. This part of questionnaire results showed that GPS and Wi-Fi points on the map are required e-services for all tourism related online maps. Also, grades of informative desk points on the map, interactive maps, online practical information and online information on highlights are high.

## 3.2.3 E-Tour Services Preferences

Virtual tours are generally the simulation of an existing location with the help of sequential videos or still images. They help in presenting views to inaccessible areas and provide an interesting and excellent alternative to fieldwork when expenses, time or logistics are an issue for people. Also, there are some types of these tours as the real-time virtual tour with the same help and there are app-based mobile tour guides which help to physically travel as with a tour guide in the tourism area. In the questionnaire, one part divided and designed with the title of "E-Tour Services".

There were most relevant e-services below of this title. Attendees asked to mark the options with two questions as "Please choose e-tours which you already tried." and "Please choose e-tours which you would like to try." The aim of these questions is specified which e-tours already tried and which e-tours would like to try by the attendees. Sorting as follows in both questions; 360 or Panoramic Tour, AR (Augmented Reality) Tour, Podcast Tour, Real-time Virtual Tour, Still Photo Tour, Tour with Mobile Tour Guide App, VR (Virtual Reality) Tour.

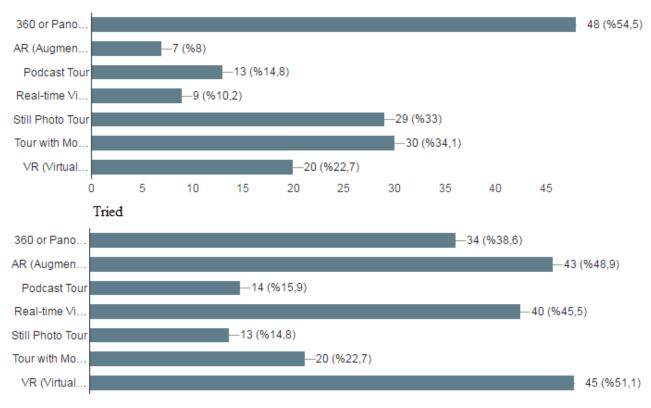




Figure 11. E-Tour Services Preferences

It is the figure of the e-tour services preferences with the information of attendees tried and would like to try. The first part of the figure shows that more than half of the attendees tried 360 or panoramic tour. Also, percentages of still photo tour and tour with mobile tour guide are not low. AR, real-time virtual tour, podcast tour and VR tried less by the attendees.

The second part of the figure shows that more than half of the attendees would like to try VR. Also, percentages of AR, real-time virtual tour and 360 or panoramic tour are not low. Still, photo tour, podcast tour, tour with mobile tour guide would like to try less by the attendees.

### 3.2.4 Attributes Preferences

In the questionnaire, one part divided and designed with the title of "E-Service Attributes". After asking the user preferences in e-services based on their importance, this part designed with the aim of import data of user preferences in e-services' attributes based on their importance. This part was important because the efficiency of e-services originated from the e-service attributes. There were the main attributes below of this title. The question was "Which following e-service attributes you consider as most important for a tourism website/app?" And options were:

- Accessibility The related line asks importance of easy access and use of website/app.
- **Information-trust** –The related line asks importance of the combination of knowledge quality and trust structures that correspond to the information confidence dimension of website/app.
- **Interaction** –The related line asks importance of feature that facilitates operations such as real-time feedback and effective communication of website/app.
- **Personalization** –The related line asks importance of communication within consumers and the website/app.
- **Privacy and Security** –The related line asks importance of reliably in the protection of a user's personal information of website/app.
- **Content** –The related line asks importance of informing and processing capabilities of website/app.
- **Design-Structure** The related line asks importance of design structure of website/app.
- Learnability –The related line asks importance of the characteristics of the interacting system that enable users to understand how to use it at first, and then how to reach the maximum performance level of website/app.
- **Memorability** –The related line asks importance of the ability of an ordinary user to use the interface effectively after an interval of website/app.
- **Navigation** The related line asks importance of providing clear tags that explain what a user will find when they click on website/app.
- **Performance** The related line asks importance of providing a high level of performance of website/app.

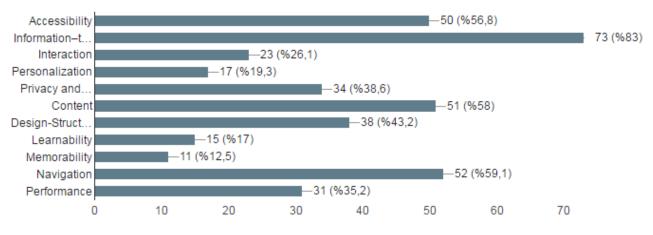


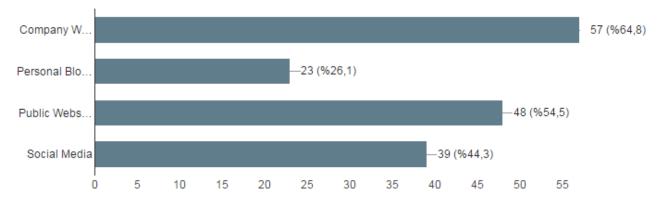
Figure 12. Attributes Preferences

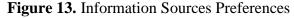
It is the figure of the website/app attributes preferences of the attendees. This part of questionnaire results showed that information-trust is the most important attribute; website navigation, content and accessibility are the major attributes. Also the percentages of design structure, privacy-security and performance are not low. Memorability, learnability, personalization and interaction selected less by the attendees.

### **3.2.5** Other Setters of the Questionnaire

In the questionnaire, some parts divided and designed for determining other setters. After asking the user preferences in e-services and their attributes based on their importance, other parts designed with different aims which explained below.

**Information Sources** – This question asked for determining which information sources they use most common. The question was "Please mark most common sources of information for travel". Options were; Company websites/apps, Personal blogs, Public websites/apps and Social media.





It is the figure of the information sources preferences for travel. This part of questionnaire results showed that to Company websites, public websites and social media are the major information sources for travel but personal blogs selected less by the attendees.

**The frequency of Occurrence** – This question asked for determining their frequency of occurrence to visit a tourism website/app. The question was "How often do you enter a website/app related to tourism?" Options were; Per Week, Per Month, Per 3-6 months, Few times in a year.

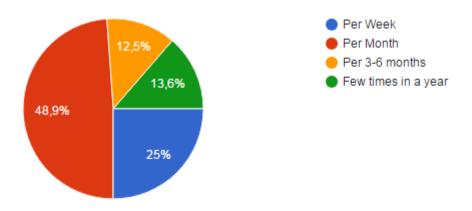


Figure 14. The Frequency of Occurrence

It is the figure of the frequency of occurrence to visit a tourism related website/app. This part of questionnaire results showed that majority of the attendees visit a tourism related website/app per month. Also the percentage of per week is not low. Per 3-6 months and few times in a year selected less by the attendees.

**The frequency of Travel** – This question asked for determining their frequency of travel. The question was "How often you travel abroad?" (Number of times per year) and it was short open-ended.

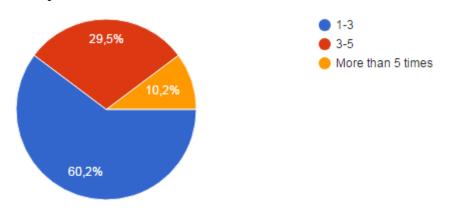


Figure 15. The Frequency of Travel

It is the figure of the frequency of travel. This part of questionnaire results showed that majority of the attendees travel one to three times per year. Also, the percentage of three to five travelling per year is not low. More than five times travel per year selected less by the attendees.

**Price** – This question asked for determining how much worth to pay for a tourism website/app. The question was "How much money you prefer to pay for a travel related website/app?" Options were; I prefer free websites/apps, 1-5 Euros, 5-10 Euros, More than 10 Euros.

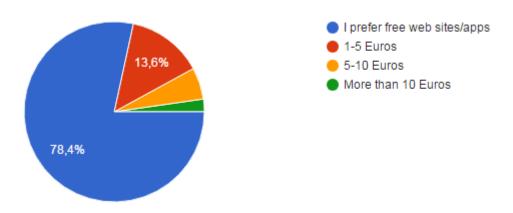


Figure 16. Price Preferences

It is the figure of the price preferences for a tourism website/app. This part of questionnaire results showed that majority of the attendees prefer free websites/apps. And there a remarkable quantity of attendees thinks to pay between one to five Euros. More than 5 Euros selected less by the attendees.

**The way of Tourism** – This question asked for determining attendees' opinion of the way of tourism. The question was "Do you think e-tours could change the traditional way of tours?" Options were; Yes, No, I do not have an opinion.

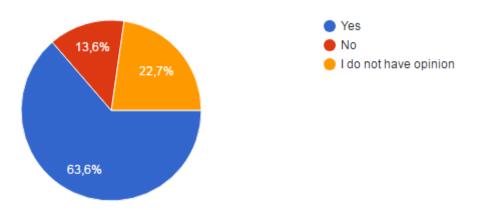


Figure 17. Opinions about the Way of Tourism

It is the figure of the opinions about the way of tourism. This part of questionnaire results showed that majority of the attendees thinks that e-tours can change the traditional way of tours.

**The reason of Usage** – This question asked for determining attendees' reason of usage of the tourism related website/app. The question was "For which purposes you use a tourism related website/app?" Options were; To save time, For determining the next destination, Personal causes as an interesting and useful platform, To read articles, watch videos, listen audio etc., related to specific destination, To reach all important details/literature about destinations, Booking flights, hotel etc.

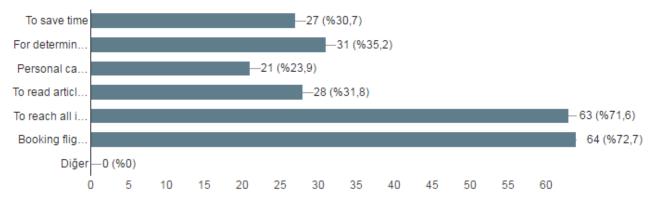


Figure 18. The Reason of Usage

It is the figure of the reason of usage of the tourism related website/app. This part of questionnaire results showed that to reach all important details/literature about destinations and booking are the major purposes for using tourism related website/app. The proportion of determining the next destination, saving time, reading articles, personal causes and watching videos, listening audio etc. related to a specific destination selected less by the attendees.

**Requirements** – This question asked for determining attendees' requirements from an e-tour platform. The question was "How do you imagine an e-tour platform which would meet your requirements?" Options were; Native language, Free participation, Easy content, Using a number of additional sources (video, audio, photos, articles etc.), Platform popularity and other.

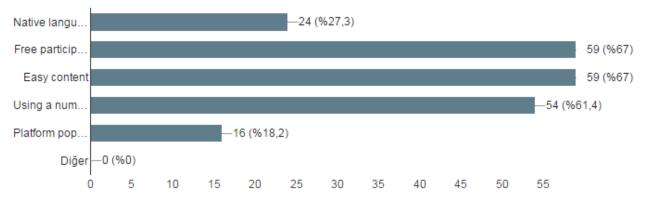


Figure 19. The Requirement Preferences

It is the figure of the requirement preferences. This part of questionnaire results showed that free participation, easy content and using a number of additional sources like video, audio, photos, articles etc. are required for the e-tour platform. The proportion of native language and platform popularity selected less by the attendees.

Acceptation – This question asked for determining attendees' acceptation of e-tours according to their requirements. The question was "Would you accept to participate in e-tours with your selected requirements?" Options were; "Yes, it would be interesting", "No, I prefer the traditional way of tour", "I do not have opinion".

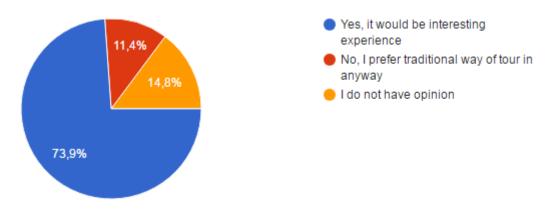


Figure 20. The Acceptation

It is the figure of the acceptance of e-tours according to their requirements. This part of questionnaire results showed that majority of the attendees interested with e-tours if the requirements are met.

#### **3.3 Conclusions of Chapter 3**

Online practical information and online information on highlights are required informative e-services for all tourism related website/app. Also including or being linked to e-services like an event calendar, one tourist/resident portal, and online city offices may be beneficial for tourism related website/app.

GPS and Wi-Fi points on the map are required e-services for all tourism related online maps. Also, grades of informative desk points on the map, interactive maps, online practical information and online information on highlights may be beneficial for tourism related online maps. Half of the attendees tried 360 or panoramic tour as an e-tour.

Also still photo tour and tour with mobile tour guide used by the remarkable quantity of attendees. Half of the attendees would like to try VR. Also, the remarkable quantity of attendees would like to try AR, real-time virtual tour and 360 or panoramic tour. Information-trust is the most important website/app attribute; website navigation, accessibility and content are the major attributes.

A remarkable quantity of attendees thinks design-structure, privacy-security and performance are important. Company websites, public websites and social media are the major information sources which attendees use for the purpose of travel. The majority of the attendees visit a tourism related website/app per month.

A remarkable quantity of attendees visits a tourism related website/app per week. The majority of the attendees travel one to three times per year. Also the remarkable quantity of attendees three to five times travelling per year. The majority of the attendees prefer free websites/apps. And the remarkable quantity of attendees thinks to pay between one to five Euros. To reach all important details/literature about destinations and booking are the major purposes for using tourism related website/app.

Free participation, easy content and using a number of additional sources like video, audio, photos, articles etc. are required for thee-tour platform. The majority of the attendees interested with e-tours if the requirements are met. And the majority of the attendees think that e-tours can change the traditional way of tours.

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Importance	Informative	Online Map	Website/App	
Level	<b>E-Services</b>	E-Services	Attributes	
Very High	- Online practical	-GPS	-Information-trust	
	information and online	-Wi-Fi points on the map	-Navigation	
	information on		-Accessibility	
	highlights		-Content	
High	-Event calendar	-Desk points on the map	-Design-structure	
	-One tourist/resident	-Interactive maps	-Privacy and	
	portal	-Online practical	security	
	-Online city offices	information and online	-Performance	
		information on highlights		

Table 4. User Preferences of E-Services and Attributes

(Source prepared by the author)

It is the table user preferences of e-services and website/app attributes for the tourism related website/app and e-services according to results of the survey.

# CONCLUSIONS

- E-services in the tourism sector have reached widespread variations on the internet. The
  nature of e-services operations in the tourism sector makes it essential for designers to
  consider certain usability attributes of the websites/apps in the development process.
  Website/app attributes and usability have great importance for attracting users. Without
  noticing of information source type all of them should be user-friendly and efficient in
  content. In that direction, these are provided to user satisfaction and trust. Integrating highquality attributes to the e-services is the critical effective factor for attracting users and
  present benefit.
- In that kind of fast growing and mainly informative-based sector like tourism should take advantage of the benefits of the development of information technology. Technological innovations are mainly developing by e-service providers, e-service entrepreneurs and e-tour operators.
- 3. There is a new and trend term in the literature as "online travellers" for the people who are not able to physically travel but would like to travel. E-tour operators can find solutions for online travellers also. An online travellers' purpose can be choosing next destination as people who are able to travel but not sure where to go and, learning new things via real-time virtual tours and other alternative e-services. But Georama's e-service concentrated on one niche as a start-up and not includes other beneficial e-services.
- 4. Online practical information and online information on highlights are required informative e-services for all tourism related website/app. Also including or being linked to e-services like an event calendar, one tourist/resident portal, and online city offices may be beneficial for tourism related website/app. GPS and Wi-Fi points on the map are required e-services for all tourism related online maps. Also, grades of informative desk points on the map, interactive maps, online practical information and online information on highlights may be beneficial for tourism related online maps.
- 5. To reach all important details/literature about destinations and booking are the major purposes for using tourism related website/app. Free participation, easy content and using a number of additional sources like video, audio, photos, articles etc. are required for thee-tour platform.

6. Information-trust is the most important website/app attribute; website navigation, accessibility and content are the major attributes. Also, users think design-structure, privacy-security and performance are more important than other website/app attributes.

# RECOMMENDATIONS

- It is recommended to find useful, reliable and integrated e-services solutions for the huge quantity online travellers. Since the users want/need to the save time/cash and while they think that e-tours can take place in traditional tours; but they have not yet participated in many e-tours; serving with an integrated tourist electronic service that will meet all the possible and effective needs of users to participate can attract them and develop tourism in that way.
- For achieving that; to take satisfaction and trust of the users by providing true and reliable information with giving importance to website/app attributes as website navigation, accessibility, content, design-structure, privacy-security and performance for attracting users. To add all important details/literature with an easy content and additional media sources like video, audio, photos about destinations and, booking possibilities in the tourism related website/app.
- Recommendations are valid for both public and business websites/apps but in addition for businesses it is recommended to attract the users by providing e-services as a trial, demo or free versions with paid e-services also.

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**Gündoğan T.**User Preferences of E-Services in the Tourism Area for Implementation in X Enterprise/ Master's Work in Electronic Business Management. Supervisor Dr. Marius Laurinaitis. – Vilnius: Mykolas Romeris University, Business and Media School, 2017. – 79 p.

### ANNOTATION

Master thesis analyses the user preferences of e-services in the tourism area for implementation in X enterprise, discusses the existing e-services and its quality measures, information sources in the tourism area, provides full monitoring of real-time virtual tour e-service by example of an e-tour operator company, and presents the quantitative criteria of user preferences by asking international students. Master's thesis consists of three parts. The first section analyses the theoretical aspects of e-services in the tourism sector, online information sources and the attributes affecting e-service quality. The second section analyses technological innovation in etourism and e-tour operators, Georama real-time virtual tour platform, its key features and comparing with attributes affecting e-services in the tourism area for implementation provides users' view analysis by the preferences of e-services in the tourism area for implementation in X enterprise.

**Keywords:** E-service, E-service Quality, Effective E-Service, Tourism, Virtual Tour, Live Tour, Real-time Tour, Georama

Gündoğan T. Vartotojų požiūris į elektorinines paslaugas turizmo srityje ir jų įgyvendinimas X įmonėje / Magistro baigiamasis darbas. Vadovas Dr. Marius Laurinaitis. – Vilnius: Mykolo Romerio universitetas, Verslo ir medijų mokykla, 2017. – 79 p.

### ANOTACIJA

Šis magistrinis darbas analizuoja, kurių e-paslaugų įgyvendinimui turizmo sektoriuje įmonės X vartojai teikia pirmenybę. Darbas pristato jau egzistuojančias e-paslaugas ir jų kokybinius parametrus, nagrinėja informacinius šaltinius turizmo srityje, pristato realiu laiku atliktą turo monitoringą po elektronines paslaugas teikiančio e-turizmo operatoriaus įmonę. Taip pat pristato kiekybinę analizę, kuri buvo pasitelkta norint ištirti kurioms paslaugoms vartotojai teikia pirmenybę.

baigiamasis darbas susideda iš dalis Magistro trijų daliu. Pirmoji analizuoja elektroninių paslaugų teorinius aspektus turizmo sektoriuje, internetinius informacijos šaltinius ir atributus, kurie įtakoja elektroninių paslaugų kokybę. Antroji dalis analizuoja technologijų inovacijas elektroniniame turizmo sektoriuje ir elektroninių turų operatorių paslaugas. Taip pat apžvelgia "Georamos" platformą, kuri vykdo virtualius turus realiu laiku. Ši paslauga yra palyginama su atributais, kurie tiesiogiai įtakoja e-paslaugų kokybę. Trečiojoje dalyje pateikiama analizė, kuri parodo vartotojo požiūrį į e-paslaugas turizmo srityje ir jų įgyvendinimą X imonėje. Pabaigoje yra pateikiamos išvados ir pasiūlymai.

**Raktiniai žodžiai:** E-paslaugos, E-paslaugų kokybė, E-kelionės, Efektyvios e-paslaugos, turzimas, virtualūs turai, turai realiu laiku, Georama.

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### SUMMARY

The Master thesis analyses the user preferences of e-services in the tourism area for implementation in X enterprise. One of the main concerns in the sector is to find out and provide quality e-services. As all businesses, one of the whole foundations of the company is providing effective e-service to the user and assures user satisfaction with user preferences. The empirical study of innovation in e-tourism and e-service website has been conducted by using the example of *Georama*. Also, methods of scientific literature and business and technology websites 'documents analysis have been applied in the paperwork.

The aim of the study is according to literature and the user preferences, to analyze the concept of e-services and both principal and contemporary e-services in tourism sector, and online information sources, and possibilities of effective e-services through attributes affecting e-service quality, and to recommend the set of a full package of e-services to cover all niches in the tourism sector for X enterprise. The analysis is based on four main tasks: to understanding and analyzing e-services and possibilities of effective e-service in the tourism sector, to clarify the Georama and its system and its purpose in the tourism sector, to analyze the available and combinable e-services and systems of X enterprise and to create empirically a full monitoring and support e-service package and to recommend the full package of e-services for to cover all niches in the tourism sector for X enterprise. The object of the research is the package of e-services in tourism sector and determination of effectiveness in the virtual e-services by using the example of Georama, and implementation in X enterprise.

Master's thesis consists of three parts. The first section analyses the theoretical aspects of e-services in the tourism sector, online information sources and the attributes affecting e-service quality. The second section analyses technological innovation in e-tourism and e-tour operators, Georama real-time virtual tour platform, its key features and comparing with attributes affecting eservice quality. The third section provides users' view analysis by the preferences of e-services in the tourism area for implementation in X enterprise

After the theoretical part and quantitative study results, most important attributes and required combinative e-services mentioned in the conclusions and the recommendations sections.

Gündoğan T. Vartotojų požiūris į elektorinines paslaugas turizmo srityje ir jų įgyvendinimas X įmonėje / Magistro baigiamasis darbas. Vadovas Dr. Marius Laurinaitis. – Vilnius: Mykolo Romerio universitetas, Verslo ir medijų mokykla, 2017. – 79 p.

### SANTRAUKA

Šis magistrinis darbas analizuoja, kurių e-paslaugų įgyvendinimui turizmo sektoriuje įmonės X vartojai teikia pirmenybę. Vienas iš pagrindinių turizmo sektoriaus problemų – išsiaiškinti ir suteikti kokybiškas elektronines paslaugas. Kaip ir visuose verslo sektoriuose, pagrindinis įmonės tikslas yra suteikti efektyvias e-paslaugas vartotojams ir užtikrinti jų pasitenkinimą. Empyrinė studija buvo atlikta, norint ištirti inovacijas e-turizme ir elektronines paslaugas interneto puslapyje naudojant "Georama" pavyzdį. Taip pat buvo išanalizuota mokslinė literatūra, verslo ir technologijų internetiniai puslapiai.

Tyrimo tikslas remiantis literatūra ir vartotojų pasirinkimui, išanalizuoti e-paslaugų koncepciją ir e-paslaugas turizmo sektoriuje. Taip pat apžvelgti internetinius informacijos šaltinius ir efektyvių e-paslaugų pritaikymo galimybes, naudojant e-paslaugas įtakojančius atributus. Taip pat rekomenduoti e-paslaugų paketą, kuris pilnai patenkintu X įmonės, kuri dirba turizmo sektoriuje, poreikius.

Atlikta analizė remiasi keturiomis pagrindinėmis užduotimis: suprasti ir išanalizuoti epaslaugas ir jų galimybes turizmo sektoriuje, atskleisti Georamos pagrindinį tikslą turizmo sektoriuje, išanalizuoti pasiekiamumą ir e-paslaugų apjungimą ir sistemas X įmonėje, rekomenduoti e-paslaugų paketą, kuris pilnai patenkintu X įmonės, kuri dirba turizmo sektoriuje, poreikius.

Analizės tiriamas objektas – e-paslaugų paketas turizmo sektoriui ir efektyvumo nustatymas virtualioms e-paslaugoms naudojant Georamos pavyzdį ir įgyvendinimą X įmonėje.

Magistro baigiamasis darbas susideda iš trijų dalių. Pirmoji dalis analizuoja elektroninių paslaugų teorinius aspektus turizmo sektoriuje, internetinius informacijos šaltinius ir atributus, kurie įtakoja elektroninių paslaugų kokybę. Antroji dalis analizuoja technologijų inovacijas elektroniniame turizmo sektoriuje ir elektroninių turų operatorių paslaugas. Taip pat apžvelgia "Georamos" platformą, kuri vykdo virtualius turus realiu laiku. Ši paslauga yra palyginama su atributais, kurie tiesiogiai įtakoja e-paslaugų kokybę. Trečiojoje dalyje pateikiama analizė, kuri parodo vartotojo požiūrį į e-paslaugas turizmo srityje ir jų įgyvendinimą X įmonėje.

Pabaigoje yra išskiriami svarbiausi atributai ir naudojamos e-paslaugos yra paminimos. Taip pat pateikiamos išvados ir pasiūlymai.

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# **SUPPLEMENTS**

## 1. User Preferences of E-Services in the Tourism Area Survey

Hello, I am an Electronic Business Management student at the Mykolas Romeris University and the Middlesex University of London.

I am in the process of writing my master thesis.

I conducted the survey of "User Preferences of E-Services in the Tourism Area" to make an analysis of preferred and effective e-service for the tourism sector, mostly about online tours.

The main aim of this survey is to analyze the concept of e-services and both principal and contemporary e-services in tourism sector, and online information sources, and possibilities of effective e-services through attributes affecting e-service quality, and to recommend the set of a full package of e-services to cover all niches in the tourism sector for X enterprise.

The survey is anonymous.

Thank you in advance for your answers.

### Gender

- o Male
- o Female

### Age

- o 18-25
- o 26-40
- $\circ$  40 and more

Cycle of the studies

- o Bachelor Studies
- Master Studies
- PhD Studies

Nationality: ....

Please mark most common sources of information for travel. (Multiple choices\*)

- Company Websites/Apps
- Personal Blogs
- Public Websites/Apps
- Social Media

How often do you enter a website/app related to tourism?

- o Per Week
- Per Month
- Per 3-6 Months
- o Few Times in a Year

How often you travel abroad per year?

- o 1-3
- o 3-5
- More 5 Times

For which purposes you use a tourism related website/app? (Multiple choices\*)

- ✤ For Save Time
- ✤ For determining the next destination
- ✤ Personal causes as interesting and useful platform
- ✤ To read articles, watch videos, listen audio etc. related to specific destination
- ✤ To reach all important details about destinations
- ✤ Booking flights, hotel etc.

Which following e-service attributes you consider as most important for a tourism website/app? (Multiple choices\*)

- ✤ Accessibility
- ✤ Information-trust
- $\clubsuit$  Interaction
- Personalization
- Privacy and Security
- ✤ Content
- Design-Structure

- ✤ Learnability
- ✤ Memorability
- ✤ Navigation
- Performance

How do you imagine an e-tour platform which would meet your requirements? (Multiple choices\*)

- ✤ Native language
- ✤ Free participation
- ✤ Easy content
- Using a number of additional sources (video, audio, photos, articles etc.)
- Platform popularity

Would you accept to participate in e-tours with your selected requirements?

- Yes, it would be interesting experience
- No, I prefer traditional way of tour in any way
- $\circ$  I do not have opinion

Please choose e-tours which you already tried. (Multiple choices\*)

- ✤ 360 or Panoramic Tour
- ✤ AR (Augmented Reality) Tour
- Podcast Tour
- ✤ Real-time Virtual Tour
- Still Photo Tour
- Tour with Mobile Tour Guide App
- VR (Virtual Reality) Tour

Please choose e-tours which you would like to try. (Multiple choices\*)

- ✤ 360 or Panoramic Tour
- ✤ AR (Augmented Reality) Tour
- Podcast Tour
- ✤ Real-time Virtual Tour
- Still Photo Tour
- Tour with Mobile Tour Guide App
- ✤ VR (Virtual Reality) Tour

How much money do you prefer to pay for a travel related website/app?

- I prefer free web sites/apps
- o 1-5 Euros
- 5-10 Euros
- More than 10 Euros

How important do you consider the following "Informative E-services" for a tourism website/app? (Evaluate: 1-5)

	1	2	3	4	5	6
City Wikipedia						
e-Forum						
Event Calendar						
Integrated system						
One tourist/resident						
portal						
Online city offices						
Online information						
on highlights						
Online practical						
information						
Podcasts/downloads						
Radio and TV						
broadcasting						
Thematic search						

	1	2	3	4	5	6
GPS						
(Global						
Positioning						
System)						
Informative						
desk points						
on map						
Interactive						
Maps						
Online						
information						
on						
highlights						
Online						
practical						
information						
Wi-Fi points						
on map						

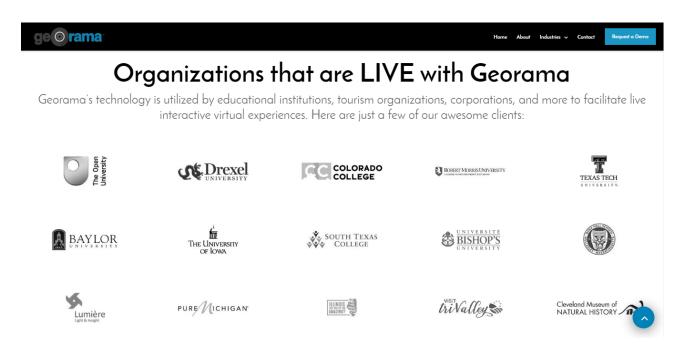
How important do you consider the following e-services in "Online Maps" for a tourism website/app? (Evaluate: 1-5)

Do you think e-tours could change the traditional way of tours?

o Yes

- o No
- $\circ$  I do not have opinion

# 2. Images from Georama's Websites



(Source: Georama.com)

George Contraction About George	Drop Us A Line prama? Fill Out The Form or Send Us An Email.
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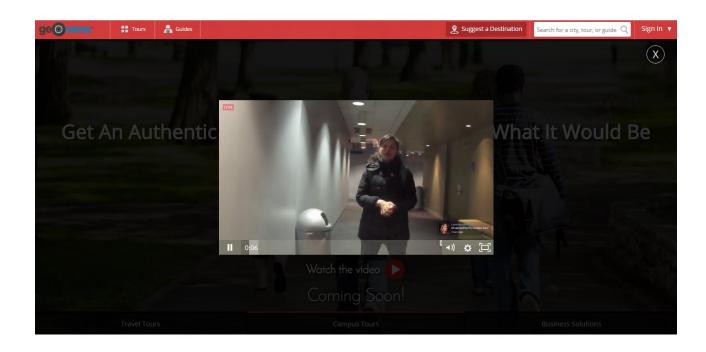
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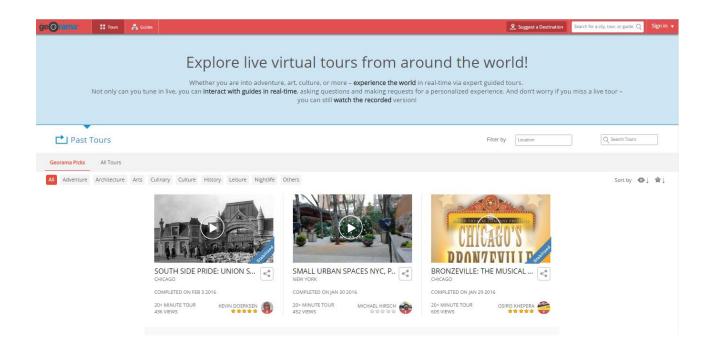
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