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Using a systemic approach to assess Internet marketing communication within hospitality industry☆

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ABSTRACT

Due to their direct connection with tourism, the accommodation and hospitality industries belong among the leading service sectors that, with the arrival of the Internet, had to significantly change their strategies related to customer communication. The study presented in the following article builds upon the literature and past research done in the area of Internet marketing in the hospitality industry. Based on the previous findings, we propose a general conceptual systemic model of Internet marketing communication, with customers specifically selected for hospitality facilities. The proposed model covers all stages of online communication process including the initial phase of addressing the targeted audience, subsequent conversion through company/facility websites, order processing and collection of feedback. The systemic approach allows us to focus on the process-nature of communication and closer identify all the inputs and outputs of each stage, along with the related online instruments that the digital environment of the World Wide Web offers.

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1. Introduction

Under the influence of an increasing number of Internet users and expanding self-service technologies, the end consumer now has the power to organize their tourist experience on-his-own, without the need of assistance by the traditional travel agency. The Internet allows the customers to directly communicate with accommodation facilities and other service providers (Stockdale, 2007). Internet communication and online technologies are generally considered useful planning tools by all customer segments. However, with the advent of generation Y, they have gained more importance and slowly become predominant (Xiang, Magnini, & Fesenmaier, 2015a; Xiang, Schwartz, Gerdes, & Uysal, 2015b). Thus, the current tendency is to implement a more personalized customer communication with emphasis on the comfort of the user while accessing information, as well as on the quality of reservation services.

Moving the main communication channel of hotels and other accommodation facilities onto the Internet created specific conditions for the application of CRM (consumer relationship management). In the area of electronic commerce, which the hospitality industry in recent years has joined, we talk about so-called e-CRM (electronic CRM).

The methods applied within e-CRM strategies aim to use the basic strengths of the Internet to communicate updated information and provide personalized services, along with added customer value (Langvinienė & Daunoravičiūtė, 2015). Ab Hamid and McGrath (2005) in their study identified 12 dimensions of Internet communication that influence the efficiency of e-commerce marketing strategy: quality of information, design, customer service, fulfilment terms of the transaction, integrated marketing channels, online communities, bonuses, levels of personalization, website security, added customer value, reliability and price advantage. Mekkamol, Piewdang, and Untachai (2013) developed and tested the validity and reliability of a four-factor e-CRM model using exploratory factor analysis and structural equation modelling. They found a positive relationship between shopping convenience, website character, care and service dimensions and website contact interactivity.

Customer satisfaction or dissatisfaction with any of these criteria may be spread due to the existence of social networks and online communities that quickly distribute such information across the entire digital environment. The percentage of the web and mobile application-based services offered by travel agencies and hospitality facilities has been growing every day as well as marketing efforts that include digital social media (Gulbahar & Yildirim, 2015). Digital information transmitted via the Internet is now an integral part of numerous marketing efforts. The level of implementation by lodging facilities may differ, but the general trend indicates that the need to address customers via Internet channels is increasing (Law, Qi, & Buhalis, 2010).

Since hospitality services are perceived by customers as a purchase with very uncertain emotional outcomes, they reach for independent confirmation before making a decision (Lewis & Chambers, 2000). Researchers currently focus on the needs and initial motivation of Internet users in searching for travel information online, as well as their behaviour and the virtual-response strategies of lodging and other hospitality facilities. Although many active Internet users find online browsing of travel destinations pleasant, others consider the search for specific information disturbing and time-consuming. This is no doubt due to the great quantity of information provided by numerous travel portals and travel search engines (Rabanser & Ricci, 2015). The need to provide advice and guidance to the Internet user is all the more important because of the growing relevance of interpersonal influences among and between communities of users.

In this paper, we describe results from this area of Internet communication strategies of lodging facilities. These results are presented in the form of a systemic model covering all stages of the communication process with such customers, as well as all possible online tools that may be included and managed with regard to the general marketing strategy of the hospitality unit. For the purposes of this research, the data were gathered from secondary sources and case studies that focus on one or more aspects of such virtual communication, in order to obtain a more complex overview. That allows us to apply the systemic approach in a more consistent manner, which otherwise might not be achieved within a single research. We believe our model will help link current findings related to Internet communication in tourism that, despite their extensiveness, are rather scattered into separate research topics. This paper also includes a practical application of the systemic model as an analytical tool that illustrates its possible use by managers of lodging and hospitality facilities when optimizing marketing strategies.

2. The basic principles of the systemic approach

General System Theory (GTS) represents a scientific approach that provides a universal method to analyse a research problem. The aim of this is to establish general principles applicable to the study of all kinds of existing systems at all levels and in all disciplines. General System Theory can be understood as a common language that connects knowledge from various areas into an interdisciplinary communication (Skyttner, 2001). The term system theory was used for the first time by Ludwig von Bertalanffy in 1920, when he mentioned, in one of his articles the severe shortcomings of studying each part of a living organism separately. According to Bertalanffy, such investigations failed to provide any information concerning the coordination of these parts, including the processes occurring between them. Scientists should, in his view, focus on laws describing the function of complex biological systems, not just their components. Bertalanffy described this methodology as a systemic theory of organisms. His concept was very well received by the scientific community and system-thinking began gradually to be applied to other areas such as sociology (Von Bertalanffy, 1972). Systemic approaches represent a very complex scientific method. In spite of this, due to the scope limitations of this paper, we will describe only the basic principles and definitions necessary to understand the construction and functionality of the proposed model.

Under the word system for these purposes we understand everything that is not chaos, everything that has a purpose, order and structure (Boulding, 1956). According to Ackoff (1971), a system can be regarded as a set of two or more elements, where the behaviour of each of them is reflected in the behaviour of the whole. These interconnected entities and the relationships between them contribute to a reduction of local entropy. In terms of layout and structure of the system, entropy represents an important concept. Entropy exists in all kinds of systems and needs to be understood as a system status-indicator. The more energy of the system degrades, the more the entropy increases. If the system is isolated from all the possible inputs from the environment (essentially a closed system), entropy over time reaches its maximum, resulting in a termination of the entire system. However, open systems, have support mechanisms that allow the state of maximum entropy to be delayed. These mechanisms ensure a sufficient supply of matter, energy and information and counteract entropy. These processes are referred to as negentropy (Bailey, 1987).

Ongoing system control mechanisms are the main subject of cybernetics. Norbert Wiener is considered to be the founder of cybernetics and in 1948 he published a major paper on control theory; “Cybernetics or Control and Communication in the Animal and the Machina”. In his book, he tried to identify general principles relevant to both engineering and living organisms. Right from its inception, its main area of interest became the processes correcting errors in internal mechanisms and communication within the system, as well as with the surrounding environment. This effort to keep all variables in equilibrium is called homeostasis in living organisms. Cybernetic control systems are highly efficient because they require just small amounts of energy to work efficiently since their main task is the processing of information rather than energy conversion. These controlling mechanisms consist of

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information processing, programming, decision-making and reciprocal communication (Wiener, 1948).

These feedback processes operate on the principle of the following stages: In the first phase, the control centre sets optimal parameters and the goals the system should achieve. During the second phase, these settings are transformed through the processes of output generation that will influence overall system behaviour and the conditions within its surroundings. These changes are recorded and transmitted back to the control centre, where they are compared with the desired parameters. If an error appears that putts the system out of balance, the control centre initiates a corrective action. Cybernetic principles, as well as principles of General system theory, are applicable to any field of science (Ashby, 1957).

All the above principles must be taken into account when performing a systemic analysis of a given phenomenon. In order to establish a model of a system, it is necessary to first determine what elements this system consists of and the environment within which it operates. By object, we mean the main input element entering the transformation process to become subjected to the change of state, through which it is transformed into a state used to satisfy certain needs (Gharajedaghi, 1999).

This required change in state is provided by the system elements – operators responsible for the transformation process. We may divide the operators into three basic groups: human factor, technical means and external conditions resulting from the surrounding environment. The human factor includes technical process operators who, based on their expertise, knowledge, skills, abilities and qualifications make decisions and implement the service. The resulting effects of these activities are then manifested in the desired change of state of the operand. Technical means represents the tools used by operators or acting independently (automatically) during the implementation of the various operations of the technical process. Their effects on the transformation of the input are determined by performance and operating characteristics of these means, as well as by their management systems. External conditions generated by the surroundings influence the functionality of the input and output components of the technical process by choosing the time and place of the implementation of transformation procedures (Churchman, 1968).

System approaches represent the starting point for finding the best practices for the management of systems. The basic feature of the system is its integrity, i.e. the system acts to its environment as one indivisible complex. The behaviour of this complex is carried out by the elements that constitute it. Each element is characterized by its properties, which are the source of the particular system's behaviour.

Systemic approaches include two phases: analysis and synthesis. The analytical stage consists of the following steps: 1) refining the formulation of the problem, 2) developing a plan for finding a solution to the problem, 3) defining the elements and structure of the system and its connections to the environment, 4) determining the goals of the system by clarifying its functions and 5) determining the criteria for evaluating the reliability and efficiency of system functions.

Systemic analysis represents the main body of this paper. During the synthesis, conclusions from the analytical phase are applied and the subsequent points are followed: 1) creating a model of the system and simulating its functions or behaviour toward the environment, 2) optimizing the system's behaviour, 3) proposing a control method of system functions and 4) ensuring the required reliability and effectiveness of the system (John, 2003). Systemic synthesis will be explained in Section 5 using the case study of Hotel Y.

3. Methodology and key factors identification

We used secondary research to identify the most influential aspects of Internet communication relating to customers in the tourism and hospitality industry. As a research platform, we chose the ScienceDirect database that we explored using the keywords Internet hospitality, Internet tourism, and publication date as search criteria of the articles limited by 2000. According to Buhalis and Law (2008), 2000 is considered a milestone in terms of the transformational effects of ICTs on the tourism and hospitality industry. We did not set any cut-off point, our sample thus included papers available in the ScienceDirect database on 25 November 2015.

Based on these criteria we found 3083 results for the entry “internet hospitality” and 7097 papers for the keywords “internet tourism”. We deliberately selected generic search entries in order to cover the widest range of related topics as possible. For both search entries, all citations found, along with abstracts, were exported into a text file. The only limitation is, that filters used by the database include in the list of results only papers that have these keywords mentioned in the title or in the name of the journal they were published in. Some of the relevant papers may, therefore, be excluded. For example, the paper entitled The effect of website features in online relationship marketing: A case of online hotel booking which was published in the Electronic Commerce Research and Applications would not make it in the predefined sample of papers. This limitation represents the main reason why we chose lexical content analysis only as a starting point for our research.

In the first stage of the literature assessment, we ran a lexical content analysis using QUITA (Quantitative Index Text Analyser) software. QUITA determines the number of tokens appearing in the text and the frequency of their occurrence. The results are presented in the form of the frequency table. We then removed non-specific tokens from the outputs of the analysis using a predefined negative vocabulary, leaving us only the tokens that were carriers of the main information.

A second adjustment we made consisted of the extraction of tokens with rather frequencies (<20). The remaining tokens, based on their semantic meaning, were subsequently divided into six categories, representing the most discussed topics described in the search results (Table 1).

The categories identified were then explored as individual topics in a more detailed manner. We found 130 articles dedicated to the topic of ICT adoption in the tourism and hospitality industry. Customer loyalty, satisfaction, and brand equity were discussed in 188 reviewed papers. Semantic Web and customer search for information represent 50 total articles, the least described problematic.

The role of electronic intermediaries and virtual word-of-mouth were represented by 178 and 240 entries respectively. Web presentation and website features were analysed in 476 articles that were part of our analysis. The conclusive findings related to these six factors are described in the following sub-chapters. Subsequently, taking these six factors into consideration, we applied the principles of systemic theory and proposed an integrated model, linking e-tools together that may be implemented by lodging facilities during individual stages of the marketing communication process, along with their causal relations.

3.1. Aspects included in the systemic model of Internet communication within the hospitality industry

As described in Section 2, the systemic approach consists of two phases: analytic and synthetic. In this subsection, we make a systemic analysis of ICT-centred communication in the tourism and hospitality industry. Based on the conclusions from secondary literature sources we define the structure of the system, its elements, goals, and functions.

3.1.1. ICT adoption by tourism organizations

3.1.1.1. Benefits and disadvantages of ICT adoption. According to Alford and Clarke (2009), information and communication technologies represent integral parts of every organization. They have penetrated the tourism market to the extent that no subject has been left uninfluenced. Moreover, the benefits of ICT implementation have many times been proven. ICT reduces costs, improves operational activities and the

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Table 1
Quantitative lexical analysis of the search results.

ICT adoption		Customer loyalty and satisfaction, brand equity		Electronic word-of-mouth		Semantic Web and customer search for information		The role of electronic intermediaries		Web presentation	
Token	f	Token	f	Token	f	Token	f	Token	f	Token	f
Adopt	25	Access	123	Advertising	74	Potential	223	Destination	587	Visit	48
Adopted	36	Accessibility	26	Affecting	44	Preferences	87	Destinations	254	Web	345
Adopting	34	Administration	54	Affective	33	Content	202	Facilitators	23	Website	244
Adoption	131	Antecedents	32	Awareness	62	Context	201	Interaction	60	Websites	254
Advances	80	Availability	26	Behaviour	236	Customers	223	Interactions	34	Design	155
Business	509	Brand	187	Behavioural	221	Decision	164	Interactive	37	Dimensions	116
Businesses	102	Branding	65	Behaviour	127	Decisions	62	International	555	Availability	56
Case	299	Cognitive	46	Blogs	28	Environment	183	Repurchase	25	Attributes	138
Communications	67	Willingness	36	Comments	24	Frequency	30	Reputation	35	Mobile	75
Competitiveness	74	Applications	136	Communities	121	Functional	26	Platform	41	Cognitive	22
Computer	52	Attributes	123	Community	179	Choice	138	Platforms	29	Perception	82
Control	66	Commitment	35	Attention	101	Identified	125	Policies	85	Quality	31
Development	578	Communication	242	Attitude	58	Information	859	Experienced	27	Improvement	15
Effectiveness	47	Wireless	54	Attitudes	127	Insight	30	Tour	95	Usefulness	56
Employees	86	Expectations	60	Attraction	22	Intention	136	Tourist	432	Clarity	48
Expert	36	Experience	279	Attractions	44	Intentions	124	Tourists	413	Reliability	65
Facilitate	37	Loyalty	138	Discussion	56	Ranking	35	Transaction	31	Effectiveness	47
Firms	162	Mobile	143	Effects	188	Ratings	32	Risk	105	Value	31
Growth	148	Mobility	43	Electronic	116	Purchase	85	Safety	66	Information	89
Impact	284	Online	677	Emotional	30	Purpose	123	Security	105	Order	20
Improvement	39	Perception	66	Engage	32	Shopping	59	Booking	63	Transaction	52
Innovations	51	Quality	387	Enhance	65	Patterns	62	Destination	587	Recommendations	32
Knowledge	297	Relationship	263	Event	48	People	144	Travel	636	Payment	20
Level	188	Relationships	129	Events	70	Search	147	Trust	137	Safety	52
Managers	179	Reliability	28	Experiences	183	Searching	27	Market	334	Access	24
Operators	94	Satisfaction	266	Facebook	30	Seek	30	Reservation	33		
Opportunities	130	Understanding	202	Factors	341	Segmentation	56	Reviewed	23		
Order	175	Usefulness	40	Image	200	Selection	55	Availability	21		
Performance	276			Interviews	95	Suggestions	50	Smart	55		
Perspectives	127			Marketing	743	Tools	76	Telephone	24		
Products	175			Media	412	Views	31	Agencies	28		
Recommendation	47			Motivation	65	Virtual	115				
Recommendations	86			Motivations	71						
Recommender	31			Mouth	66						
Service	497			Network	191						
Services	356			Networks	155						
Technologies	181			Promote	43						
Technology	377			Promotion	103						
Reports	48			Promotional	23						
Responses	72			Reviews	200						
Smart	55			Sharing	56						
Telephone	24			Social	939						
Software	40										

overall quality of services provided. In addition to these advantages, to great extent ICT impacted both the behavioural and social processes that are directly connected with user generated content and the collection of information concerning customer travel preferences (Nicolae & Sabina, 2012). Their influence even extends beyond the boundaries of individual enterprises. ICT may help establish collaborative networks between hospitality facilities, allowing them to enhance their capabilities and knowledge-sharing (Breukel & Go, 2009; Del Chiappa & Baggio, 2015).

Daghfous and Barkhi (2009) highlight the possibilities of (customer) knowledge management by using the Internet in hospitality settings. The study focuses mainly on the use of ITC in total quality, customer relation and supply chain management. The authors emphasize the necessity of knowledge-based competition and underline a need to improve the readiness of hospitality organizations to collect and use this knowledge to its fullest benefit. A survey targeting Greek hotels run by Sigala and Chalkiti (2014) revealed a significantly low implementation rate of web 2.0 tools for knowledge management purposes. The authors also proposed a utilization-importance analysis allowing the identification of appropriate web 2.0 technologies, taking into account the special needs of the lodging facility.

Despite the unquestionable benefits of Internet (marketing) communication, research results also suggest that online tools and technologies within certain markets or under certain conditions don't necessarily bring expected benefits. One decade ago, Ma, Buhalis, and Song (2003) mentioned in their study the case of Chinese hospitality enterprises. They demonstrated that the majority of hospitality and lodging facilities continue to prefer a combination of traditional methods with Internet applications as an information channel. The reasons for limited use of the Internet on certain travel markets included: lack of trust on the part of both, the customer and supplier; security problems, privacy issues, cultural characteristics, low technological development and external industry value systems (Ma et al., 2003).

3.1.1.2. Innovation behaviour in tourism. The level of ICT adoption by hospitality and accommodation organizations varies widely. This phenomenon may be caused by factors, such as environmental, organizational, innovative, as well as the perceived characteristics of each implemented technology, although not all these factors may be equally important. The adoption process in small and medium-sized enterprises is usually influenced by resource, technological, managerial and financial constraints, any of which alter adoption behaviour.

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Nowadays, tourism enterprises generally don't have major issues with implementing new ideas as fully functional innovations, although the number of new products and processes is relatively low. The barriers are more the result of an internal inability to protect these innovative improvements (Najda-Janoszka & Kopera, 2014). Compared to other branches of industry innovations in tourism, these are very specific since the final product is usually a combination of tangible and intangible components (Cosma, Paun, Bota, & Fleseriu, 2014).

Data gathered from Spanish hotels supports the hypothesis that tourism enterprises are more oriented toward non-technical, commercial innovations (Camisón & Monfort-Mir, 2012). Customer innovation represents the most important move in that direction (Ganglmair-Wooliscroft & Wooliscroft, 2015).

Despite the non-technical nature of tourism innovations, many new commercial and customer improvements are the outcome of technological changes adopted by the customers. The ratio of innovation generated by ICTs increases annually (Aldebert, Dang, & Longhi, 2011). Customers have become active participants in the innovative process. Very often they are the pioneers offering business opportunities for tourism enterprises (Williams & Shaw, 2011).

3.1.1.3. User influence on provided services. The development of online technologies brought benefits for suppliers as well as consumers. Consumers gain access to reliable information and the ability to make reservations in moments. Thanks to emerging reservation systems and the quality of search engines, online travel agencies and customers have become more self-sufficient and able to use multiple tools to plan their trips (Hojeghan & Esfangareh, 2011). Tourism enterprises developed a significant effort to address potential customers within their natural environment, which is a very often digital form (Bizirgianni & Dionysopoulou, 2013). There are of course individuals who, due to psychological constraints, prefer to do their actual 'shopping' offline and use the Internet only as an information source.

The increasing number of active mobile Internet users has been recently forced hospitality enterprises into meeting the needs of customers by offering mobile hotel reservation (MHR) systems and services. Wang and Wang (2010) studied the perceived value of MHR. Testing the customers of selected Taiwan hotels, they identified two main factors influencing the adoption of MHR by customers. The majority of results showed that information quality may have the greatest impact. Adopting an MHR system allows hospitality facilities to provide (besides booking services), other useful information such as mapping, routing, tracking and traffic updates.

Wang, Li, Li, and Zhang (2016) examined the internal motivation of tourism facilities to adopt MHR systems. They discovered that relative advantage, top management support, competitive pressure, and information intensity do not necessarily predict the adoption of MHR. On the other hand, their findings suggest that compatibility, complexity, firm size and technological competence may have a bigger impact.

3.1.1.4. M-tourism tools. Tourism enterprises must face many challenges that are connected with the implementation of m-tourism tools. First, the systems need to deal with a significant amount of tourist information, develop guidance for indoor and outdoor environments and take into account existing mobile platforms with different requirements. Rodriguez-Sanchez, Martinez-Romo, Borromeo, and Hernandez-Tamames (2013) in their paper describe the GAT platform as a potential solution to all three problems.

The GAT platform allows managers to create automatic context-aware mobile applications without any programming skills or additional effort in uploading updated information. The development of a similar platform could change the nature of the entire industry while helping SME to adopt sophisticated ICT-based strategies.

The emergence of mobile devices provided tourism enterprises yet a new possibility to approach customers on the move. In terms of geographical location, mobile technologies and geographic information systems (GIS) also have a substantial effect on tourism-related information strategies (Yang & Hsu, 2015). Tourists find these tools very useful since context-aware applications provide better navigation and trip planning services (Tussyadiah & Zach, 2012). For example, Noguera, Barranco, Segura, and Martínez (2012) proposed a 3D-GIS recommender system specifically designed for mobile devices and combining the advantages of a 3D map-based interface and information transmitted to the user based on his location. The implementation of location/context aware systems is perceived by customers as a necessity since they are used to this type of communication and expect to receive it.

3.1.1.5. Social context mobile marketing. Social context mobile (SoCoMo) marketing has also become a very powerful tool in shaping the nature of the entire industry (Buhalis & Foerste, 2015). Constantly evolving virtual communities reinforced the influence of other travel opinions on the decision-making process of potential customers. Mobile technologies, along with various social media, are nowadays recognized as indispensable marketing tools.

Mariani, Di Felice, and Mura (2016) carried out a survey exploring Facebook strategic use by Italian destination management organizations (DMOs). Their study-outcomes indicate that each organization employs social media in a different manner and with variable frequency. The authors prove that sharing moderately long comments, accompanied by visual content, has a positive impact on the Facebook engagement metrics of DMOs.

Similarly, Yoo and Kim (2013) investigated the availability of online newsrooms (such as Facebook, Twitter, Youtube, or Flicker) on U.S. state tourism websites. Despite the high availability ratio, the authors found shortcomings in the ways organizations distribute this newsroom content. Only some of them enabled features such as RSS feeds or e-mail distribution.

While the effects of the Internet and social media on marketing communication in tourism has been examined many times before, there are a surprisingly low number of studies analysing the effects of online advertising. Wu, Wei, and Chen (2008) observed the effectiveness of Taiwanese travel agencies' Internet-based advertisements. They came to the conclusion that the impact of an advertisement is significantly influenced by user attitudes toward online banner ads along with his product involvement.

In order to enhance these two variables, travel agencies should focus more on the design of advertised content. For example, adding a text to distributed pictures will draw more attention to the advertisement. Moreover, customizing the text into language that the targeted audience understands increases the time spent viewing the pictures (Li, Huang, & Christianson, 2016). The advertising effect may also be moderated by the combination of products offered (hotel + restaurant). According to Park and Nicolau (2015), joint collaborative advertising has a much greater effect than separate consumption.

In terms of ICT adoption, a majority of the reviewed papers focused on the implementation of websites, their quality and user-experience design that answered the needs of customers in tourism. Since the research related to this topic is rather extensive, these findings are discussed in an individual Section 3.1.6.

3.1.2. Customer loyalty, satisfaction and brand equity

Improving Internet marketing strategies within the hospitality industry requires understanding how new technology is perceived by customers. Researchers currently focus on the identification of dimensions that influence online purchase behaviour and the establishment of e-loyalty toward websites and e-services provided by accommodation facilities.

3.1.2.1. Building customer e-loyalty. Kim, Lee, and Hiemstra (2004) tried to determine whether the purchase of travel products may be or may not be determined by loyalty to an online virtual community. Using the measurement of community factors (influence and relatedness,

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Integration, fulfilment of needs and shared emotional connection) the authors proposed a list of features that company websites should provide in order to increase customer loyalty. They draw attention to the need to stimulate participation by potential and former customers on facility Internet profiles. This may be achieved by forums, online guest-books or chat rooms that allow users to express their opinions and describe their experience with the facility or the destination.

Radu and Dobrescu (2014) assessed tourist satisfaction with information found online. Using multivariate analysis to test their proposed model, they found that probability of purchase increases together with satisfaction regarding information found. Perceived e-service quality is a combination of multiple factors, such as efficiency, reliability, system availability and privacy. E-service quality directly influences service value and positively affects the loyalty customer website relationship (Roger-Monzó, Martí-Sánchez, & Guijarro-García, 2015).

The effects of e-service quality may be moderated by the cultural background of the customer. Managers trying to impact international travel should thus consider these cross-cultural differences in loyalty formation processes (Belanche Gracia, Casaló Ariño, & Guinalíu Blasco, 2015).

Research organized by Mouakket and Al-hawari (2012) in the United Arab Emirates examined e-service quality, satisfaction and customer loyalty regarding online reservation. Based on their findings, the authors recommend improving the quality of online reservation services, leading to the more pleasant use of this technology by customers and eventually enabling a higher level of loyalty. Zehir, Sehitoglu, Narcikara, and Zehir (2014) came to the similar conclusions. Levels of customer loyalty are also influenced by subjective factors.

3.1.2.2. Effects of eTrust. Among these factors, the academic literature frequently describes eTrust as a significant element. Wang, Law, Hung, and Guillet (2014) analysed the intentions of Chinese web users to purchase reservations via hotel websites. The research demonstrated that users only moderately trusted the website and hotel promises. Further analysis confirmed that eTrust is a complex construct, consisting of three components that include integrity, benevolence, and ability. Integrity refers to customer belief that promises represented by facilities on the Internet will be fulfilled; customers expect a certain guarantee that must be incorporated in the website's design. Benevolence means a serious commitment by facilities to provide, aside from economic profits, the best care possible.

According to Wang et al. (2014), this commitment engages a sense of attachment to the hotel website. Surprisingly, travel service quality did not have a strong impact on building online trust. The authors explain this that travel-related websites are highly information sensitive and therefore carry elevated content risk that puts the privacy and safety before the actual quality of services offered. In addition, Kim and Srivastava (2007) demonstrated that network performance (i.e., download and upload speed) had an important impact on customer satisfaction and customer loyalty. Intent to purchase may be influenced by many other variables, such as website and brand attitudes or opinions of the virtual online community. Hwang, Yoon, and Park (2011) in their research (focused on casual-dining) examined the behaviour of web-users in terms of cognitive and affective response to website advertisements. They find that this response has a positive impact on website and brand attitudes. Moreover, their results support the suggestion of cognitive (information-based) responses being more important than affective.

E-loyalty, e-quality, and e-satisfaction are very complex constructs that have continually been analysed in relation to e-retailing since they are the antecedents of both purchase and repeated purchase. However, in tourism, these relationships are not yet fully described in relation to the online environment.

3.1.3. Electronic word-of-mouth

Consumers tend to imitate patterns based on social learning paradigms and interpersonal communication. These processes, described as word-of-mouth (WOM), mediate the exchange of information and opinions on products or services flowing from buyers to potential customers (Hawkins, Best, & Coney, 2004). In the hospitality industry, many research studies have already established a direct connection between WOM narratives and levels of purchase. New Zealand researchers, Morgan, Pritchard, and Piggott (2003), analysed the influence of negative comments spread by tourists with bad experiences on local tourism. They demonstrated that negative WOM can lead to devastating results in terms of local image.

In the virtual environment, there are several electronic tools that can be used to manage WOM narratives and influence interpersonal relationships. Nevertheless, all these instruments may differ in the extent of their impact, which depends upon the individual characteristic of each media, such as the synchronous or asynchronous sharing of information or the nature of the communicational links that may be created via these instruments (Litvin, Goldsmith, & Pan, 2008).

The expansion of digital technologies has entirely changed the concept of word-of-mouth. Dellarocas (2003) distinguishes three major challenges: 1) due to the easy accessibility of the Internet and other communication technologies, the exchange of information has become an instantaneous process, allowing WOM to multiply and spread with unprecedented speed; 2) new communication styles and formats have appeared that not only enhance the power of virtual WOM but also provide the marketers new control tools; 3) the reinforced anonymity generated by the Internet opened new possibilities to share false information and misleading messages. All these challenges that arose with the expansion of electronic word-of-mouth influence the economic activities of hospitality units in both directions: either in a positive way, if they take a highly responsive approach or possibly have a very negative impact on facility performance.

3.1.3.1. Integrative model of eWOM. Jalilvand, Samiei, Dini, and Yaghoubi Manzari (2012) proposed an integrative model including eWOM, destination image and tourist attitudes toward a destination. In their paper, they tested three hypotheses: whether eWOM has an impact (1) on destination image, (2) on tourist attitudes toward a destination, and (3) on travel intentions. The test results confirmed the importance of eWOM and its influence on the above three characteristics. The authors recommend the generation of eWOM via online communities created on facility websites, noting that eWOM is more influential than commercial propagation. Results found by Mauri and Minazzi (2013), who studied the influence of web reviews on purchase intentions of hotel customers, came to the same conclusions.

Thus management of online reviews has become a crucial aspect of Internet communication, with which managers must become more familiar. Customer comments are a valuable source of information describing real-life experiences (Bilgihan, Barreda, Okumus, & Nusair, 2016). The methods of response to these comments are as important as their presentation on various websites (Marchiori & Cantoni, 2015). Managers and marketers need to especially learn how to respond to negative comments since the reaction of the hotel or another accommodation facility proves to customers that the business cares about the satisfaction of its clients (Kim, Lim, & Brymer, 2015).

Kim and Canina (2015) proved that customers use the average ranking of the service reference group as a comparative standard. In addition, consumers appear to be more responsive to negative references (Filieri, Alguezaui, & McLeay, 2015). Big data analytics facilitates the analysis of user generated content in a very quick and simple manner (Marine-Roig & Anton Clavé, 2015). Yet not all information shared via social networks may be considered useful. A majority of share user content is visual and thus has greater social and emotional rather than informational value (Munar & Jacobsen, 2014).

3.1.4. The Semantic Web and customer search for information

The current shifts in the hospitality industry may be also attributed to the development of so-called Semantic Web technologies. These

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focus on organizing (tourism and hospitality) information into systems that link basic keywords and conceptual relationships, in order to build a cross-system infrastructure that integrates information originating from various sources. Such systems increase flexibility, accuracy, and timeliness, thanks to the use of semantic markup (Prantner, Ding, Luger, Yan, & Herzog, 2007).

Adding a semantic meaning to machine-processed metadata allows web content to be presented in a more contextually relevant way. In the case of tourism-related data, a keyword search may not be sufficient, since tourists often browse the Internet without any specific idea what they hope to find (Čech & Bureš, 2009).

In terms of search engine optimization (SEO), the primary aim of marketing efforts is to place higher in the search results listed by search engines and maintain that ranking (Lawrence & Giles, 1998). Tourism-oriented research focuses mostly on the analysis of various queries (chains of keywords) used by those looking for more specific information concerning travel and destinations (Pan & Fesenmaier, 2006).

Current research demonstrates that the search process consists of two stages: 1) keyword (query) formulation and 2) evaluation of the results. According to Xiang, Wober, and Fesenmaier (2008), in terms of the length, query questions entered by prospective tourists tend to be rather short, usually not exceeding four keywords. Most users also evaluate as relevant or 'worth further investigation' only those results listed on the first two search pages.

3.1.4.1. Search engine optimization. In his study, Wöber (2006) analysed the online visibility of hotel facilities and destination marketing organizations in Europe on the six most popular search engines. He discovered that the majority had very low rankings and were not easily reached by the users, who struggled to even access individual websites.

Search index data may serve as a prediction tool for calculating future visitors. Yang, Pan, Evans, and Lv (2015) proposed a search query selection mechanism allowing more accurate prediction of customer volumes. Search engine data for hospitality facilities could become a low-cost demand analysis instrument. Many studies focusing on search properties and search behaviour of potential customers validated the original hypothesis that being placed among the top search results represents a significant advantage.

However, achieving good placement is still not enough. If the presentation of the result (text snippets) fails to be relevant, users won't proceed to the website content. Despite this observation, search characteristics may differ, depending upon the type of search interface (number of pictures, layout) (Pan, 2015).

Travel-related search sessions are generally short in duration. Research led by Xiang and Pan (2011) revealed that online traveller searches use a relatively small number of keywords and that their queries are very similar. Internet users primarily search for information concerning accommodation and transportation. However, there are certain specifics for each destination, reflecting its size and the travellers' awareness of it.

3.1.4.2. Recommender systems. Another problem that arose with the arrival of e-tourism is that available information is often sometimes overwhelming for the potential customer. As a result of such overload, tourists often consult other supporting sources of information. These sources are called 'recommender systems' and provide reassurance to the customer by providing assistance and guidance in the form of text summaries divided category (Buhalis & Law, 2008). The aim of recommender systems is to filter information provided in a personalized manner that suits the individual needs of each user. These systems analyse explicit information given by the user himself and implicit information that is derived from user behaviour by the system (Borràs, Moreno, & Valls, 2014). Gavalas, Konstantopoulos, Mastakas, and Pantziou (2014) describe six categories of recommender systems: collaborative filtering, content-based filtering, knowledge-based filtering, demographic filtering, matrix factorization and hybrid recommender systems.

Recommender systems are considered a key factor in all branches of e-commerce since they allow offering a high level of personalization and partially predict customer needs. Research related to this topic mainly covers the design procedures of such systems (Garcia, Sebastia, & Onaindia, 2011) and require at least basic computing knowledge (Yera, Castro, & Martínez, 2016; Gan, 2015).

One of the most recent recommender system designs is described by Nilashi et al. (2015). They developed a multi-criteria collaborative filtering method using a Gaussian mixture model with Expectation-Maximization (EM) algorithm and Adaptive Neuro-Fuzzy Inference System (ANFIS). According to the experiment results, this recommender system appears to be highly accurate.

3.1.5. The role of e-intermediaries

The development of information and communication technologies had many unquestionably positive effects on the travel industry, as well as on the perspectives of accommodation facilities. Although, there persist some negatives. The growing globalization and personalization of the market have affected distributional structures and the role of intermediary articles of the distribution chain such as travel agencies or travel information centres.

According to Lyu and Hwang (2015), the arrival of online search for information decreased demand for services of travel information centres by 27.6%. Paradoxically, these negative effects may be eliminated by adapting to these new circumstances and adopting online technologies as a propagation and distribution tool. The results presented by Lyu and Hwang suggest that implementation of social networks could significantly improve the current situation.

Tourists using social networks show a stronger tendency to visit information centres. Thanks to the effortless sharing of travel experiences and real-time broadcasting, social network users are more eager to obtain additional information.

As already mentioned, the competitive climate changed. Travel agencies were influenced the most among those who felt the consequences. Travel agencies were challenged to meet the needs of their customers and extend their services into the digital environment. The new business model included e-procurement instruments as well as complex e-commerce strategies (Andreu, Aldás, Bigné, & Mattila, 2010).

To survive in the new market, intermediaries had to invest into ICT infrastructure and accept the new power of the customer (Berné, Garcia-Gonzalez, & Mugica, 2012). As stated in Lin, Lee, and Chen (2009), only those agencies that accept the e-business model may succeed in the future. All these tendencies led to the creation of many online travel agencies and booking portals, whose role is to advise as a first requisite and then distribute the product.

Many lodging facilities establish cooperative relationships with online travel agencies (OTA) in order to increase their market share. In this case, the customer may choose from two distribution channels: booking a room via hotel website or via the OTA. The OTA receives a commission fee for each room sold (Ling, Dong, Guo, & Liang, 2015). Nevertheless, this relationship is unfavourable for the OTA, since customers prefer getting more detailed information and will preferably go to the hotel's website (Guo, Zheng, Ling, & Yang, 2014).

Ling et al. (2014) studied the internal motivation of hotels to cooperate with OTA. They discovered that hotels with lower occupancy rates are more inclined to expand their marketing and distribution channels via an OTA. Moreover, OTAs with many online followers/customers and with only a few listed hotels are more attractive to lodging facilities.

3.1.6. Web presentation

Adapting to the emerging e-commerce market implicitly requires the creation of an online presence. As was demonstrated by Scaglione, Schegg, and Murphy (2009), building a website on an owned domain or in a portal positively influences the revenue of accommodation facilities. The rate of website adoption may vary across star-ratings and for

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various types of accommodation facilities. Although the research organized by Salavati and Hashim (2015) focused on website adoption by Iranian hotels, it suggests that the adoption rate is very similar for all hotel categories.

The findings presented by Salavati & Hashim confirmed that the e-marketing strategies of many facilities stagnated after the creation of a website. Half of the hotel websites observed had scarcely been updated and achieved very low average page ranks. Based on these results, it may be assumed that despite the creation of an online presence, some travel enterprises continue to use Internet profiles more for the presentation of their business than for e-commerce purposes. Under current market conditions, that could be insufficient. A similar study was conducted by Li, Wang, and Yu (2015) in the US. A majority of the hotels studied focused on the creation of new communication strategies and on the dissemination of information, while only a few were very oriented toward relationship building.

There are multiple choices for lodging facilities and other hospitality enterprises in terms of website features. Díaz and Koutra (2013) prepared a segmentation analysis of persuasive features, based upon which they identified four feature-oriented hotel segments: (1) interactive hotel chains, (2) promotional efforts and informative hotel chains, (3) minimally persuasive hotel chains and (4) credible and easy to navigate hotel chains.

3.1.6.1. Website effectiveness. Website features contribute to the generation of facility image and may even affect the image of the whole destination. Rodríguez-Molina, Frías-Jamilena, and Castañeda-García (2015) created an experimental design allowing them to manipulate message type and information overload on websites. This experiment confirmed that the Internet is the most persuasive medium for destination marketing, as has already been confirmed by many other studies. The findings also emphasize the importance of choosing the correct amount of information to be presented on the website – presenting too many offers and alternatives makes users feel overloaded since their processing capacity is limited.

In order to assure website effectiveness, managers and marketers must also focus on both the utilitarian and hedonic characteristics of online shopping. As stated in Bilgihan and Bujisic (2014), websites that successfully manage both these dimensions are more likely to achieve improved purchase results. Hedonic features contribute to triggering emotional reactions and commitment. Utilitarian characteristics are linked with rational decision-making. The authors recommend that hotels should incorporate into their website design such interactive features as virtual tours, games or the option to create some of the website content (Chung, Lee, Lee, & Koo, 2015).

Current research tends to introduce new quantitative methods that may help understand and measure the e-quality of tourism websites. Novabos, Matias, and Mena (2015) proposed a user-centred approach to the evaluation of website quality in tourism. The authors build upon four quality factors: information completeness, credibility, usability, and persuasiveness. Based on the rating of Filipino tourism websites by a panel of local tourists, they aggregated both credibility and persuasiveness into a single factor - influence.

This methodology allows the computing of a User-Perceived-Quality score that may be used as an assessment tool for optimizing and measuring a hotel website's impact on the customer. Hao, Yu, Law, and Fong (2015) developed a genetic algorithm-based learning approach, designed with the purpose of understanding customer satisfaction including personal preferences. Del Vasto-Terrientes, Fernández-Cavia, Huertas, Moreno, and Valls (2015) using the Web Quality Index (WQI) designed by Fernández-Cavia, Rovira, Díaz-Luque, and Cavaller (2014) introduced an extensive method called ELECTRE-III-H. The combination of these two procedures enables the implementation of a comparative analysis of competitive websites and the identification of strong and weak website features.

4. Internet marketing communication in tourism: systemic model

4.1. Interactions of the systemic elements in the virtual environment

Internet marketing communications by accommodation facilities represent an open system. Lodging facilities, their owners or marketers, best communicate with their surroundings by trying to get information on how to take advantage of Internet technology in order to successfully implement their marketing strategies and achieve their goals (Xiang et al., 2015a; Nicolae & Sabina, 2012). As a system, Internet marketing adapts to external stimulus and various changes such as trends in housing, economic situation, political situation, etc. (Breukel & Go, 2009; Del Chiappa & Baggio, 2015).

Potential customers, as well, interact with the surrounding environment while searching for information on which accommodation to choose, looking for references or communicating with each other (Ganglmair-Wooliscroft & Wooliscroft, 2015; Bilgihan et al., 2016). All of these activities significantly affect the individual elements of the system, as well as the entire system as such.

Another significant feature of system openness is the fact that every component of the current setting is able to quickly disappear and reappear. If, for instance, a new Internet technology is introduced in the future, the entire system must adapt and rearrange its current settings.

In order to analyse the processes and system performance, we must first identify the elements by which the system is composed (Fig. 1). In the area of Internet marketing communication in the hospitality industry, we may determine the following as such elements: information technology (Internet, online tools, mobile devices); people and companies (hotels, guesthouses etc.); customers (guests and visitors) and Internet users (potential customers). The category of information technology includes both, the basic Internet tools such as websites or e-mail, as well as the companies providing commercial services related to search engines, various types of portals, online advertising and other features that may attract additional customers.

Companies, customers, and web users all pursue their individual interests and act according to them.

All these systemic components interact with the purpose of satisfying these needs. Lodging facilities want to sell their service packages while their customers search for entertainment, travel experience or look for an accommodation for business purposes. This mechanism is driven by the laws of a classical demand-supply market, except for the fact that most of the transaction is being realized in an online environment.

Similarly, to the real-world market, the virtual market also tends to find the equilibrium on both sides. Thus the marketing Internet message in the hospitality industry should be based upon those same principles and focus not only on selling the product/service, but also on adopting a more customer-friendly approach and improving their online experience while browsing the Internet for travel and accommodation related data.

4.2. Four systemic processes within Internet communication in hospitality industry

Based on our analysis of online communication in the hospitality industry, we identified four major processes within the system, which are: the process of addressing the targeted audience, conversion, product/service consumption and the adjustment process. These processes are interdependent and the output at each step simultaneously represents the input of the next.

As is evident from the scheme (Fig. 2), the entire internal systemic process has a cyclic nature, since we presuppose that collected feedback and customer experience should trigger a response-reaction (Ganglmair-Wooliscroft & Wooliscroft, 2015) leading to adjustments in systemic components and their settings. For each of these processes

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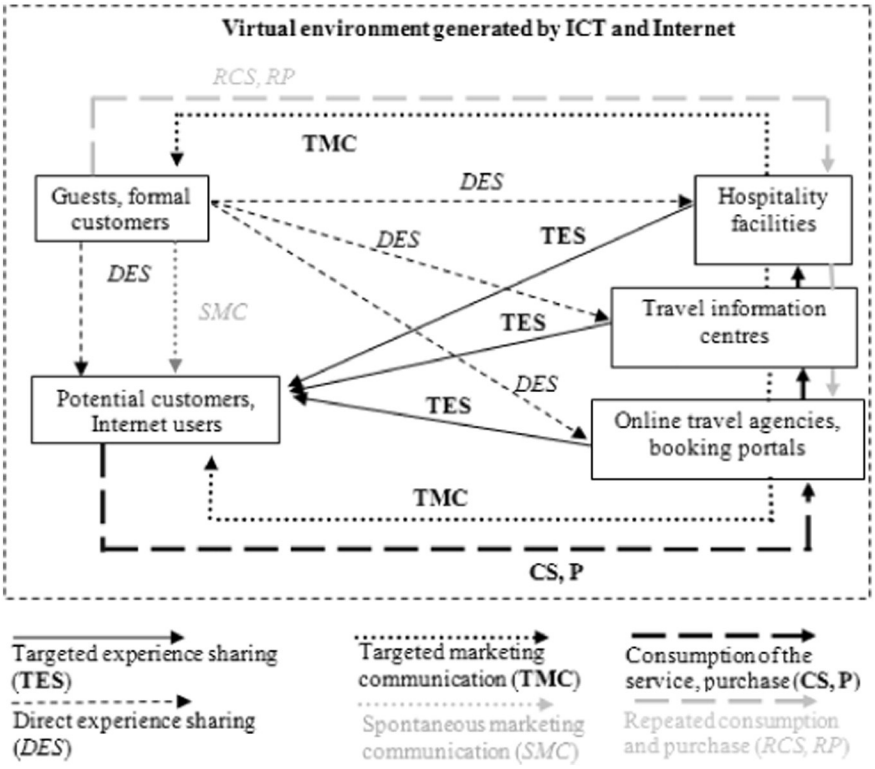

Fig. 1. Interactions of the systemic elements in the virtual environment.

we were able to determine the exact tools the accommodation facilities implement for the purpose of generating their desired outcomes.

When looking at the first process, that of addressing the audience, the inputs divide into four marketing/communicational categories: online public relations, online direct marketing, online sales promotion, online advertising. Each category relates to multiple online tools that we recorded during our analysis of secondary sources (Fig. 3). Using online instruments such as websites, social media and networks, portals, PPC advertising and search marketing tools, the facilities share the business and marketing related data with a targeted audience.

If this process is successfully coordinated by the supra-system (management of the facility) its resulting effect is to promote increased website traffic. Selling travel products and services is nowadays considered to be a matter for the e-commerce domain. The website

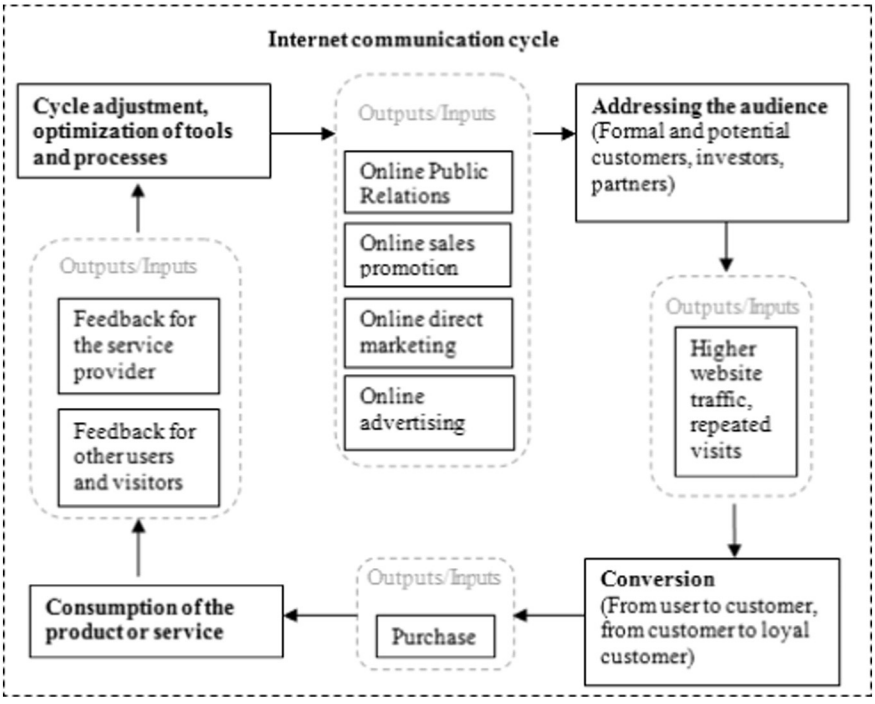

Fig. 2. Four systemic processes within Internet communication in hospitality industry.

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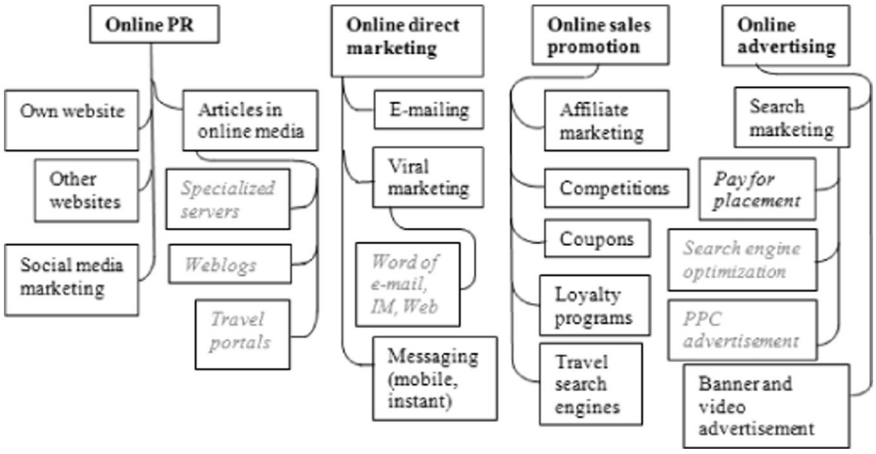

Fig. 3. Tools used during the process "addressing the audience".

presentation of the lodging facility should, therefore, be approached as an e-shop display (Roger-Monzó et al., 2015).

The output of the 'addressing the audience' process is simultaneously the input of the consequent 'conversion' that occurs via Internet marketing tools (Fig. 4) implemented on websites. This includes copywriting, referencing, news and updates, tagging or user-created content. In the case of an ideal combination of tools, the output of this process is the purchase (or repeated purchase), meaning travel packages or accommodation booking services. At this stage, it is necessary to focus on developing the attributes of e-quality, e-loyalty, and e-satisfaction.

Marketing communication must also be managed during the purchase since it may be carried out via several channels. The first is represented by reservation form on the facility website. A second option consists of selling products via specialized servers, online travel agencies or accommodation search services (Ling et al., 2015).

The cycle does not end with the purchase. In order to establish a more permanent relationship with the customer, the service-provider must pay attention to client feedback. Feedback may be collected in various ways including specialized servers, accommodation search engines, guest comment books on websites and social networks (Filieri et al., 2015).

According to cybernetic principles, feedback serves as a control mechanism comparing current parameters with planned ones. Thanks to our integrated input/output model, it is possible to identify precisely which area of the communicational process is not yet optimally configured. If, for instance, the traffic on the website reaches the desired number of visitors, yet the number of purchases stagnates, it's highly probable that some of the features and tools related to the website are not being used efficiently.

Most feedback is generated automatically without additional effort by the hospitality facilities, which makes this system viable on its own. Enterprises providing unsatisfying services or communicating insufficiently will cease to exist, due to negative WOM or lack of reliable information presented on the web. To survive in this highly competitive environment, hospitality facilities must remain aware of this feedback, encourage its creation and take active precautions based on their feedback data.

5. Using a systemic model to identify insufficiencies in online communication of a hospitality facility – case study

In this chapter, we describe the second stage of the systemic approach – the synthesis. We believe that synthesis should be individually tailored for each hospitality facility while taking as a starting point of the analysis the systemic model we proposed. Tailoring is required since the list of tools presented by us is only optional. Hospitality organizations do not necessarily have to implement all of the tools.

We tested the usability of the model on the data gathered from a medium-sized (60 rooms, 156 beds) Hotel Y in Northern Bohemia. The aim of our analysis was to determine the weak links in their online marketing communication chain and propose optimizing adjustments reflecting the principles of the systemic approach. At first, we assessed the performance of all processes described in our model. For each of

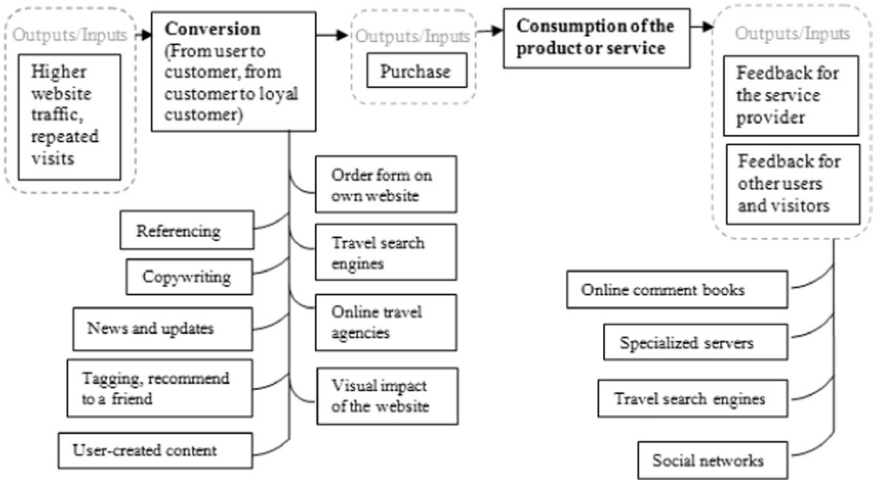

Fig. 4. Tools used during the "conversion" and feedback collection.

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the categories (inputs) outlined in Fig. 2 we made a list of tools implemented by the lodging facility and linked them with available metrics provided us by Hotel Y (Fig. 5).

5.1. Data analysis implementing the systemic model

If we look more closely at the output of the first process of the cycle, "addressing the audience," we may notice that the average daily website traffic of Hotel Y is 239 unique visits. These visits are the result of input efforts and marketing tools, namely the profile on their Facebook social network, booking service portal www.booking.com, e-mailing, pay for placement and PPC advertising. The number of visitors coming from these sources was retrieved from website analytics or from the regular reports generated by some of the service providers.

A majority of potential customers (98) visited the website directly from the search engine result page, thanks to the good placement of the hotel on the top of the result page. PPC advertising (62 visits) and booking.com portal (45 visits) seem equally efficient. The impact of e-mail campaigns is surprisingly higher than we would have initially expected but still remains moderate.

However, the number of Facebook generated visits (only 5 per day) is alarming, considering the size of the community developed around the hotel's profile (1380 fans). This low inflow of visitors is probably caused by inconsistent administration of the Facebook profile (shares a new post once in three weeks) which makes the site look not maintained.

In terms of the website's conversion rate, the results indicate severe shortcomings. There are only 3 purchases per day made via the order form, thanks to the website lack of persuasiveness. The hotel's main distribution channel is www.booking.com, a platform that requires a commission fee for each purchase made and thus diminishes the facilities' income. The marketing potential of the hotel's website is not exploited to the fullest due to the loss of many potential customers that were attracted by PPC and P4P advertisements. Website analytics confirmed the original assumption of insufficient website quality.

The statistics indicate that the average time spent on the website is 30 s, while 48% of the visitors leave after only 10 s. Even if the visitors elect to stay, they browse through individual pages very quickly and without further interest in the content viewed. In addition, Hotel Y uses a two-question pop-up form providing the guest an opportunity to express their satisfaction with the website quality. The average website quality rating was 2.5 points out of 10. Users also frequently complained about a poor organization of information, low-quality photographs, and unattractive visual design.

On the other hand, reviews related to the quality of services provided by the hotel were mostly positive. Feedback collection is done through four channels: a feedback form on the website, another feedback form distributed via e-mail, reviews published on Facebook and an external review system on www.booking.com.

From the first assessment of the feedback process, it is obvious that feedback collection managed by the provider of www.booking.com is far more effective than that organized by the facility. Despite the growing Facebook community, user generated content published on the hotel's profile is very limited (3 reviews per month). Customers share a mere two reviews per month. This lack of interest on the part of the customers may again be caused by insufficient communication by the facility.

As regards those reviews collected via the feedback form on the website and via e-mail, they are not further published on the website. The hotel thus loses the potential persuasive power that such reviews would potentially generate. Moreover, customers are not encouraged to share their opinions, comment or share their experience.

The final process of the cycle consists of making adjustments that would lead to optimization of the entire system. In this particular case, we began by improving communication on Facebook. We proposed to increase the posting frequency and include competitions that would motivate experience-sharing by customers. We also recommended Hotel Y implement a Facebook plugin on the website so the hotel might benefit from user generated content.

Apart from this change, other significant adjustments in the website design were completed: design was changed from static to responsive, professional photos of rooms and surroundings were uploaded and the overall layout was reorganized into a clearer and simple framework. Final alterations consisted in the publication of customer feedback collected through a feedback form. All these proposals were implemented by Hotel Y for a test period of two months. Following this test period, we evaluated any changes in the observed metrics.

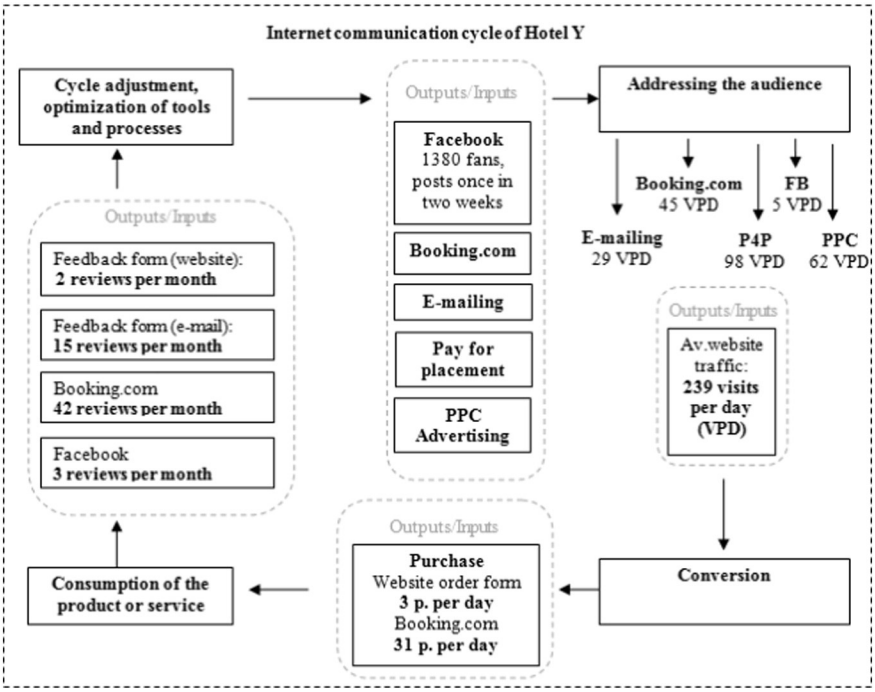

Fig. 5. Performance of online communication system of Hotel Y.

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Thanks to a higher frequency of communication on the Facebook profile, the number of fans increased by 113. However, that had only a moderate impact on the number of website's visitors (7 visits per day). Despite the remaining low number of visitors redirected from Facebook, overall website traffic reached 435 visitors per day. The most significant progress was achieved in a conversion ratio that grew to 53 purchases per day. Customers also responded very positively to the new website design, which is confirmed by a longer average time spent on the website (83 s). Adjustments we suggested contributed as well to higher customer review posting frequency.

6. Conclusions and implications for future research

The aim of this paper was to organize current knowledge concerning Internet marketing communications in tourism in a manner that connects individual topics into one common research framework. In accordance with Bertalanffy's General Theory of Systems, we analysed individual elements and processes that, together, create a system of online marketing communication in hospitality.

The structure of that system was determined using the findings presented in papers that we found in the Science Direct database. Via the QUITA lexical analyser, we were able to identify six main topics discussed by researchers that were used as a starting point for the system modelling.

We believe that our integrated systemic model will help clarify which factors influence the Internet communication process within the hospitality industry. We focused on the use of individual online tools and on each stage of the process in which they are primarily implemented by accommodation facilities. The model does not fully cover the internal intentions of the systemic components (Internet users, visitors, hotels, etc.), since they are so widely varied and complex that they should be the subject of another systemic research. The relationships described by us represent the final product of these individual and personal motives and were chosen for their direct impact on the communicational requirements of the virtual environment.

Our model may serve as an indicative scheme for managers, allowing them to gain greater control over their Internet activities, extend (or reduce) the number of tools they currently use, and/or adjust the manner by which they implement them within their marketing strategies. As it was demonstrated in the case study, systemic models determine the areas of interest that lodging facilities must focus upon in order to obtain a complete analysis of their online marketing efforts. Models presented in this paper provide a conceptual framework linking possible marketing channels and activities that are too often managed separately and not as a whole.

Due to the short test-period and lack of long-term data we were unable to test the validity of the system via structural equation modelling. However, we managed to prove its value as an analytical instrument.

In terms of academic contributions, our research thematically organizes the current knowledge into individual topics. At the same time, it also provides an integrated framework and structure proposing future research directions in the area of Internet marketing communication for hospitality enterprises. The main limitation of our research consists in an exclusively relational design that does not take into account the efficiency of individual tools, nor their importance at each stage of the process. The model is based solely on the understanding that travel enterprises repeatedly implement these tools during their marketing activities. Many authors confirmed that some instruments are efficient in terms of online tourism marketing, but efficiency rankings for individual instruments are still missing.

For future research, we recommend more closely observing the impact of the tools presented on customer behaviour, not individually as was done so far, but in the context of all other available tools. Groups of online features may influence customers differently than when they are applied individually. Cultural factors and market location may also be considered as relevant model-changers. The proposed systemic scheme on the level of online instruments may need adjustment according to the customs of each nationality since the level of implementation of ICT could vary in each country, by sex or age categories. The use of the tools described could as well depend upon the internal conditions within each travel enterprise. It is quite probable that the size of the enterprise, its location and the nature of services provided (only lodging, travel packages) might also play a significant role.

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