

A digital culture for a smart tourism

Chiara Di Meo, Master degree program in Linguistic and Cultural Mediation for Tourism Business
University of Trento, Via Tomaso Gar 14, 38123 Trento, Italy
chiara.dimeo@studenti.unitn.it

Abstract – The work highlights the main characteristics about the evolution of the way tourists access cultural offer of available destination, the role that the new technologies play in this scenario - particularly known as “digital tourism”, “e-tourism” and “m-tourism” – and the emerging challenges, especially at the national level. In a smart community perspective, the tourist experience is required to be sensational. As a result, information is personalized according to the tourists’ different profiles according to a “prosumer” orientation.

Keywords: e-tourism; digital culture; smart city; relational tourism; prosumer; tourism 3.0.

I. INTRODUCTION

Since its very first stages the tourism industry has always represented a global strategic market. However, due to the post-industrial society’s changes in terms of collective needs, much has changed and new business sectors as well as new forms of tourism have arisen, while contributing to its ongoing evolution and dynamic advancement.

Nowadays the technological convergence that features our contemporary era has gained remarkable importance, affecting mostly every sphere of our daily life. Considering its massive spread and impact worldwide, the global market has acknowledged the digital asset as a potential significant driver able to ease and improve processing data for business purposes. The concept commonly known as “The Internet of Things” indicates the existence of a variety of interconnected physical devices – ranging from tiny to huge infrastructures – that, by interacting together, are able to collect, process and exchange useful data so connecting physical and virtual worlds.

The advantages deriving from the application of ICTs are manifold and certainly they constitute one of the steps forward ever taken so far to improve efficiency, accuracy, and economic benefits.

Most assuredly, the tourism industry – the world’s largest one with the largest rate of employers worldwide – has adopted the computer-based technologies in order to come up with new insights and more innovative patterns. The aim is to meet the customers’ expectations, constantly more and more prone to the digital travel ecosystem.

II. THE CONTEXT

In the last few years, the world has witnessed the proliferation of new computer-based patterns regarding the way tourists access and process the information available for their travel. This trend is displayed not only during the planning stage, but also and especially once reached the destination and also after the visit is concluded.

Tourists’ demand for information is a constant and crucial factor because of some intrinsic characteristics of the tourist product: (1) its heterogeneity; (2) its perishability, and (3) its intangibility. In fact, unlike most massive products, it is composed of a set of different services that range from transport, accommodation, food, leisure (1). So it is a “multiple product” rather than a single one. Furthermore, it is not possible to store it once purchased. Thus it must be fruited straightaway otherwise it will be lost (2). Finally, it is not possible to test it prior to purchase, as it must be experienced live (3). Due to these peculiar characteristics, the tourist product is almost completely dependent on the set of representations and depictions that, to some extent, happen to influence consumers in making their choice, which will be experienced later, once on site [1].

Thus the exchange of information is extremely important at every stage of the above-quoted purchase cycle, and in this frame, the use of ICTs has enabled information to be managed more effectively and provided worldwide almost instantly. The Internet is the main mediator between the supply chain, the traditional intermediaries (travel agencies and tour operators) and the audience.

Considering the way ICTs are reshaping the basic structure of both commerce and society, its importance to the success of a tourism enterprise can only grow in the future.

As a matter of fact, travellers heavily rely on the Internet because of the information-intensive characteristic of travel products. A greater amount of information via the Internet is an ulterior support for travellers, since there exists a certain perceived risk associated to travel products which does not regard tangible products. Because of its above-quoted peculiar characteristics, the Internet enables travellers to access reliable and accurate information more quickly, to feel even more reassured and provides a higher tourist satisfaction.

Increasingly Destination Management Organizations (DMOs) are keen on ICTs in order to facilitate the tourist experience before, during and after the visit, and also for coordinating all partners involved. Also the UNWTO – World Tourism Organization – pointed out that 2016 was the seventh consecutive year of tourism growth. This trend is expected to continue in the future. This implies the need to make the sector more sustainable, more accessible and more inclusive and to do so, technology and innovation are the key tools [2].

However, as far as the Italian tourism industry is concerned, the World Economic Forum warns us by reporting that our national competitive index is fairly low compared to other countries, due to legislative and bureaucratic reasons as well as too uncompetitive prices, that contribute to make Italy an unappealing tourist destination. The fragmentary nature that features the Italian touristic offer is the main obstacle in the present scenario which is weakening the Italian supply

chain in favour of foreign top intermediaries (TripAdvisor, Google, Airbnb, etc.) who are far more efficient mediators between the national suppliers and the customers.

In this perspective, the MiBACT (*Ministero dei Beni e delle Attività Culturali e del Turismo*) is working on the Italian digital gap by fostering digital development on the overall Italian territory: the TDLab, the observatory on the digital tourism phenomenon, has been established. Indeed, digital technology is considered as the key driver enabling the spring of the business. In fact, it has been estimated that the web is potentially able to lead to the growth of the Italian GDT by 1% as well as increase the tourism sector employment up to 250.000 jobs. Among its main objectives, it aims at creating an integrated digital offer throughout Italy able to generate synergies among the different sectors of the Italian touristic offer (museums, cultural heritage, transports, etc.) and to tailor it according to the different visitors' profiles. In this sense, the relaunch of the ENIT (*Agenzia Nazionale del Turismo*) brand in the new digital portal is a starting point that pushes the sector towards the so-called "Tourism 3.0" phenomenon [3].

So we can conclude that the tourist experience is undergoing a profound change, as increasing consumer empowerment and new technologies are producing a breakthrough in terms of actors, roles, structures and processes. The creation of unique, meaningful and memorable consumer experiences has become the key to generate added value and competitive advantage.

III. STATE OF THE ART AND TRENDS

A. Communication, technology, human nature

In a market of increased global competition, interchangeability and replication, the search for unique, compelling and memorable experiences in terms of tourism consumption is crucial. As a matter of fact, global standardization has been replaced by individualization. Differentiation is achieved once products and niche markets are targeted, and accurate and reliable information is provided. It is pointed out that this approach improves the expectations and the perceived experience for both tourists and locals, improving their interaction [4].

In this new scenario, websites blogs, recommendation systems, virtual communities social networking sites or mobile devices are implemented to facilitate travel activities and support the tourist experience. According to Google Trends 2016, consumers increasingly turn to mobile to get itinerary ideas, compare flight fares, or reserve experiences. These activities are what Google calls "micro-moments": decision points when a well-positioned brand can influence a consumer. Moreover, today travelers tend to turn to research engines and YouTube to get some ideas and inspiration. As such, these tools are great barometers for gauging people's interest and purchase intent. YouTube is playing the most significant role thanks to travel hack videos offer, tips and advice for every stage of planning, from booking to packing, registering an increasing rate of 115% [5].

Another significant trend is the use of mobile devices which allow travelers to take real-time decisions once they arrive at the destination, as showed in Fig.1.



Fig.1: Mobile helps orientate travelers once they reach the touristic destination. (Source: think with Google)

So it is evident that traditional understanding of experience creation has changed. Thus, its main characteristics and new trends need to be properly analysed.

B. The rise of m-Tourism 2.0

The "experience economy" era, as coined by Pine and Gilmore in the mid 90s, embodies the concept of co-creation which recognizes active and empowered consumers in the co-creation of their own experiences. The worldwide massive use of new communication technologies has implied not only co-created patterns, but also technology-mediated ones. Consequently, the rise of such new social and technological paradigm has had a paramount impact on tourism. The ICTs have changed the travel market from a customer centric perspective to a customer-driven one, in which consumers play a stronger role in creating and sharing travel information through community websites, according to the Web 2.0 formula. Consumers are more likely to trust information which is easily created, distributed and fortified by consumers through networking websites, such as TripAdvisor, Twitter, etc. It is argued that success will increasingly depend on sensing and responding to rapidly changing customer needs as well as on using ICTs for delivering a tailored product in order to reshape the touristic competitiveness. Transparency in information has enabled buyers to increase their bargaining power by facilitating price comparisons and access instant, inexpensive information. Genuine rivalry was intensified because of lowered entry barriers and higher visibility provided by the Internet. In fact, innovative suppliers increasingly use advanced CRM systems to gather information about the consumers' profiles so to offer tailored and value added products, while bypassing the traditional distribution channels. The need for traditional intermediaries to shift their role to consumer advisors is becoming evident. So both tourism suppliers and online intermediaries should apply constant innovation, in terms of marketing techniques and technological advancements. In that case they would be able to get differentiated, personalised, tailored and value-added products as well as a more strategic positioning in the tourism value system. The notions of e-Tourism (electronic tourism) and m-Tourism (mobile tourism) describe the influential role played by social media and participatory culture in technological mediated scenarios. The context of direct ICT integration sets the baseline for the concept of "e-tourism";

the paradigm-shift for which each stakeholder in the marketplace is going through a redefinition of their role and scope. Within this frame, the existence of mobile devices, considering their indisputable importance in our lives and their easy portability, allow tourists to adapt information provided to their own interests. M-Tourism has therefore found its application in various tasks. Among them: navigation support for journeys; access to detailed maps and additional information about Points Of Interest (POI); weather; shops; restaurants; museums; etc. But it is especially its usability that permits to share one's personal perspective and feelings real-time and influence other users' choices. Tourists, either with the use of their laptops or mobile phones, while searching for information about a given POI, will presumably come up with both the institutional information and the users community one. According to this trend, tourists will be able to: access additional information; access new information in case they decide to repeat the experience in the future; provide their own opinions; live a before/during/after experience, and share it with others [6].

C. Participatory culture and storytelling: a prosumer perspective

The tourist experience has enabled practitioners on designing and staging memorable experiences; being better educated and enjoying higher levels of disposable income, tourists tend to look for more sophisticated destinations and POI to visit. What is more, they are striving to be part of the experience creation, by taking active part as "prosumers" at the co-creation of their own technological-mediated tourist experiences. As illustrated in the previous paragraph, the rise of e-Tourism, m-Tourism and m-Tourism 2.0 has paved the way to the "social" construction of the tourist experience [7].

Technology-enhanced experiences are characterized by instantaneousness, social interconnections, consumer independence, control of the information provided as well as a sense of experimentation, playfulness and serendipity. The term "prosumer" suggests the user's new role as both a consumer and a producer who shapes and creates his/her own product in conjunction with the overall tourist community.

Such "participatory culture" can be strategically useful to tourism professionals, as it such interaction between tourists and their devices is the centre point of experience co-creation. User related activities have gained notoriety both in commenting on information available online, and in the creation of new content made online in personal or virtual communities, websites, blogs, social media. It is also argued that prosumers form a peculiar category of customers who make choices not only because a particular product fulfils specific functions, but also because the product reflects a consumer's lifestyle, personality, identity and image which may suit a broader pattern of products and services. Therefore, consumer goods partly lose their typical use value to the benefit of symbolic values.

In this frame, transmedia storytelling is an intrinsic part of this process, as it enables customers to pass on information, culture and values in a way in which tourist experience

becomes more engaging. In fact, storytelling itself is central to the human condition, as stories reflect the way humans perceive the reality and share it with others, also emotionally.

In the tourism industry, the "prosumption" process is getting more and more observed and imitated by the market. For this reason, we can claim that "prosumers" are professional consumers and proactive consumers at the same time [8].

IV. CHALLENGES AND OPPORTUNITIES

A. A bilateral relation: some advantages

The process of co-creation results in the customer's improved specialist knowledge which results in treating consumers as prosumers. In such new scenario, there exists a set of opportunities that can derive from the existence of information created, shared by and for the user community. Consequently, the cooperation between many consumers who act jointly, exchange information, help each other (consumer network) allows taking advantage of other people's experiences and become independent from corporate information. Some scholars, such as Prahalad & Ramaswamy (2004) predict that traditional B2B and B2C companies operating in the market (producer-oriented) may be replaced by the C2B2C formula (consumer to business to consumer) in the close future [9]. In fact, the prosumer's profile corresponds to a knowledgeable user about products and keen on designing his/her own ones at the same time. But what is more, the prosumer happens to be equally involved in selling those products by spreading information and promoting it within the consumer network. Such role as "influencer" becomes evident as the prosumer tends to set trends of general consumer behaviour in an innovative way [10]. Consequently, analysis of prosumer behaviour in the tourism market have shed light on a bilateral relation that affects consumer behaviour and equally enforces certain changes in tourist supply. By this token, customers are treated as partners; as a result, companies can access information about consumers' private preferences through social media like Facebook, Instagram and Twitter. The willingness to share information about one's experience is related to creating one's image. So from the supply perspective, image creation and consequent positioning play an increasingly important role in decision-making process and, if underestimated, it may lead to the company's disregard as a potential service supplier.

B. E-governance and data interoperability: future scenarios

All such new concepts and brands described so far represent significant changes that to some extent will determine the tourism future market. Especially from a destination management perspective, such insights must be taken into serious account as the tourist experience is being more and more characterized by a higher degree of reproducibility, competition and fickleness.

The change described above in tourist participation has also affected the way tourism companies interact with their

consumers and have led to client-centred products developed in collaboration with the final consumers.

For this reason, some experts have foreseen the emerging opportunities in the travel context that urge to adopt new communication patterns. The main idea is to benefit from the huge potential deriving from the use of big data to collect and change information spread among different actors for the creation of integrated online “travel malls” in a common virtual space. On the one hand, this would allow the user to find tailored products by browsing and filtering travel-related products and, on the other hand, the whole system would get to know the customers’ preferences and to gather, process, interpret and then use such data strategically.

Despite the fact that m-tourism services are becoming increasingly available and integrated in a cross-platform way, it is claimed that many of them are still not tourist-oriented. These limitations include: limited access to POI; related multimedia content; cross-platform related problems; limited policies regarding the creation and promotion of communities with access to content based on user participation, etc.

This system is similar to what is currently known as CRS (Computer Reservation System) and GDS (Global Distribution System), whereas the envisioned system should leverage new ICTs, such as the Internet and open access systems or the World-Wide-Web, in order to gain maximum exposure and a broader user base thanks to punctual information-based services. All the digital infrastructure would need to be revised, standardized and integrated in order to support all those existing systems requiring a common format. Marketers working in the tourism sector need to be aware of electronic evolution, innovative distribution channels where the lack of an updated source of information would encourage a reactive rather than a proactive approach, the latter being far more competitive these days. On the contrary, it would be convenient for them to learn from the users’ interactions and content, and, when needed, rethink current strategies, projects, products and service. [11]

At national level, the digital shift has not been properly and attentively taken into account so far, although some first steps are being made at the moment. In fact, the main challenge regarding such digital switch over is to encourage new innovation product patterns as well as a more attentive approach over the emerging technological challenges and insights. As reported in the TDLab *Piano Strategico per la Digitalizzazione del Turismo Italiano*, in the last few decades, Italy has never really dealt with quality-oriented economic development, focusing onto the quantity-oriented one and underestimating the consequent decrease of Italy in terms of touristic destination appealing compared to other European ones more keen on the digital. The TDLab claims that such issue needs to be faced through new tools able to renovate the national touristic offer, to boost a sustainable tourism and a personalized, quality and experience-oriented offer able to gather together the touristic, the territorial and the cultural supply chains [12].

According to the *Piano Strategico per la Digitalizzazione del Turismo Italiano*, the main goal to achieve is to establish

and develop a sort of integrated data intelligence system able to work as a technological e-Governance body. The desired framework is the interoperability one for the creation of a single virtual space able to gather different contents according to uniform standards, ease the exchange and the share of information, encourage the spread of digital tourism in a more flexible, efficient and accurate way all over the Italian soil. Among the benefits we can find the drop of costs related to such activities as well as the implementation of genuine forms of completion. In fact, in Italy the lack of a common digital scheme is lamented and because of this no cooperation among the institutional governmental and governance bodies is carried out. As reported by the TDLab, such intervention would be useful for several activities. Among them: the integration of different existing technologies (POI, WC3 and OGC representations, the Open Street Map and GPS exchange format (GPX), HCAL events and RSS news); the digital rendering of places and artificial works; the application of geo-localization systems for the augmented reality fruition; the experimentation for a more efficient use of the existing open source platforms; the connection of different digital catalogues for the digitization of cultural resources (photos, videos, 3D, descriptions, database, etc.) according to the European format; crowdfunding activities of data through social networks (Google Plus, Foursquare, Swarm, Instagram, Pinterest, Facebook, LinkedIn, Eventbrite, etc.) in order to support the commercial activities (accommodation, travel planning, customers’ care, fidelity programs, etc.).

V. CONCLUSIONS

In conclusion, the ongoing progressive digitization process, the spread of social media, the Internet of Things and the open data are contributing to the creation of alternative and additional databases containing precious information about the new tourist trends and the modern tourist demand. Such sources represent a new opportunity for a better comprehension of the contemporary dynamics of tourism at communication, technology and human levels and for the design of more conscious, sustainable and strategic planning activities. All over the world, firms, governmental institutions and actors of the tourism sector are looking at the opportunities arising from the ICTs and big data applications in order to gain an added value and competitive advantage by leveraging on tourists, as prosumers, due to their proactive and reactive attitude. Today in Italy, the tourism industry is not the main sector keen on such new insights. Nonetheless, it has the greatest potential, which may lead to the relaunch of a smarter and more innovative touristic offer, thrust the evolution of a digital culture, hopefully supported by Government .

VI. REFERENCES

- [1] Tahayori, H., Moharrer, M. (2006). E-Tourism: The Role of ICT In Tourism Industry, *Innovations and Challenges*, retrieved from <http://195.130.87.21:8080/dspace/bitstream/123456789/778/1/E-tourism%20the%20role%20of%20ICT.pdf> .

- [2] World Tourism Organization UNTWO (2017), *Innovation and technology, keys to increasing the competitiveness and sustainability of tourism in Europe*, retrieved from <http://media.unwto.org/press-release/2017-04-04/innovation-and-technology-keys-increasing-competitiveness-and-sustainabilit>
- [3] Salerno, A. (2017). Obbligo digitale per il turismo italiano, *COR.COM – Il Quotidiano Online dell'Economia Digitale e dell'Innovazione*. Art. 4/06/2017. Retrieved from http://www.corrierecomunicazioni.it/tlc/32560_obbligo-digitale-per-il-turismo-italiano.htm
- [4] Neuhofer, B. (2014). The technology enhanced tourist experience, in Baggio, R., Sigala, M., Inversini, A., Pesonen, J. (eds.) (2014). *Information and Communication Technologies in Tourism 2014, eProceedings of the ENTER 2014 Phd Workshop*, Dublin, pp. 90-95.
- [5] Google (2016). *Travel Trends 2016: Data Reveals Hot Spots and New Consumer Insights*, retrieved from <https://www.thinkwithgoogle.com/advertising-channels/mobile/travel-trends-2016-data-consumer-insights/>
- [6] Beça, P., Raposo, R. (2011). M-Tourism 2.0: A concept Where Mobile Tourism Meets Participatory Culture, *ResearchGate*. Retrieved from https://www.researchgate.net/publication/271846217_m-Tourism_20_A_Concept_Where_Mobile_Tourism_Meets_Participatory_Culture
- [7] Ferreira, F., Pimenta Alves, A., Quico C. (2014). Location based trasnmedia storytelling: Enhancing the Tourist Experience, in Baggio, R., Sigala, M., Inversini, A., Pesonen, J. (eds.) (2014). *Information and Communication Technologies in Tourism 2014, eProceedings of the ENTER 2014 Phd Workshop*, Dublin, pp. 4-10.
- [8] Niezgodna, A. (2013). Prosumers in the tourism market: the characteristics and determinants of their behaviour, *Economics and Business Review n. 4 (13)*, pp. 130-141.
- [9] Prahalad, C.K., Ramaswamy, V. (2004), *The future of competition: co-creating unique value with customers*. Boston: Harvard Business School Publishing.
- [10] Atembe, R., Akbar, B. (2014). Tourists co-creation experiences onsite-enabled by mobile devices, in in Baggio, R., Sigala, M., Inversini, A., Pesonen, J. (eds.) (2014). *Information and Communication Technologies in Tourism 2014, eProceedings of the ENTER 2014 Phd Workshop*, Dublin, pp. 20-25.
- [11] Buhalis, D., Hyun Jun, S. (2011). *E-Tourism, CTR – Contemporary Tourism Reviews*. Woodeaton, Oxford: Goodfellow Publishers Limited.
- [12] MiBACT - Ministero dei Beni e delle Attività Culturali e del Turismo (2014), *Piano Strategico per la*

Digitalizzazione del Turismo Italiano. Retrieved from http://www.beniculturali.it/mibac/multimedia/MiBAC/documents/1460024515998_TD_Lab.pdf